

## Revision of the Neotropical spider genus *Enna* (Araneae, Lycosoidea, Trechaleidae)

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**Abstract.** The spider genus *Enna* is revised and the five previously known species [*E. estebanensis* (Simon 1898) (Venezuela), *E. jullieni* (Simon 1898) (Panama, Colombia), *E. minor* Petrunkevitch 1925 (Panama, Colombia), *E. nesiotes* Chamberlin 1925 (Panama) and *E. velox* O. Pickard-Cambridge 1897 (type species) (Mexico)] are redescribed. *Dosseus redundans* Platnick, 1993 is transferred to *Enna* and is redescribed and illustrated. Descriptions of 18 new species include the following: *E. baeza* (Ecuador), *E. bartica* (Guyana), *E. braslaudia* (Brazil), *E. boualdoi* (Brazil), *E. caliensis* (Colombia), *E. clickeringi* (Honduras), *E. colonche* (Ecuador), *E. eberhardi* (Costa Rica, Panama), *E. hara* (Peru), *E. huauuco* (Peru), *E. huarinilla* (Bolivia), *E. igarape* (Brazil), *E. kuyuwiniensis* (Guyana), *E. maya* (Honduras, Panama), *E. paraensis* (Brazil), *E. pecki* (Costa Rica), *E. riotopo* (Ecuador) and *E. rothli* (Ecuador). The type of *E. approximata* (O. Pickard-Cambridge), collected in Bugaba, Panama, is based on a juvenile and is considered as a *nouveau dubium*. Similarities in the geographical distributions of species of *Enna* with the distributions of species in the genera *Trechalea* and *Hesydrus* are noted.

**Keywords:** New species, taxonomy, morphology, Neotropical region

Octavius Pickard-Cambridge (1897) created a new genus, *Enna* O. Pickard-Cambridge 1897, within the family Pisauridae Simon 1890 and designated his new species *E. velox* O. Pickard-Cambridge 1897 as its type species. The genus was transferred to the valid but totally ignored Trechaleidae Simon 1890 (Simon 1890) until the family was later revalidated (Carico 1986). These spiders are characterized by a series of morphological characters including the arrangement of the eyes, as well as features of the male palpus, female epigyna, and the shape of the egg-sac (Carico 1993). Most of the species possess flexible tarsi (e.g., *Trechalea* Thorell 1869, *Trechaleoides* Carico 2005, and *Paratrechalea* Carico 2005), which may be helpful in locomotion on the surface of the water during foraging. The habitat of the spiders of this family is the vegetation near the margins of rocky streams and small rivers (Carico 1993). In this work we present the first revision of the genus *Enna*.

Based on museum specimen labels, the representatives of *Enna* seem to inhabit rocky stream margins, like some other trechaleid species found in Brazil with which we are familiar, e.g., *Paratrechalea ornata* (Mello-Leitão 1943), *Trechaleoides keyserlingi* (F.O. Pickard-Cambridge 1903) and *Trechalea bucculenta* (Simon 1898).

In this work we redescribe five of the six previously known species (Platnick 2007), while the sixth, *E. approximata* (O. Pickard-Cambridge 1893), is considered a *nomen dubium*. By describing eighteen new species, we increase considerably the size of the genus as well as enlarge the known geographical distribution of the genus in Central and South America (Figs. 4, 5). Despite the fact that this genus contains numerous species, each is known from very few specimens from very few localities. For example, *E. velox*, the type-species of the genus, is known only from a single locality in the most northern extent of the generic range in southern Mexico (Fig. 4). Seven additional species are found in Central America in a linear sequence (Fig. 4) similar to the distribution of three species of *Trechalea* Thorell 1869 (Carico 1993) found in the same

general area. In South America, there are 15 species scattered from Venezuela to central Bolivia (Fig. 5), each also with very limited distributional ranges. Two species, *E. jullieni* (Simon 1898) and *E. minor* Petrunkevitch 1925, have localities recorded from both Central America and South America. The very scattered nature of these species distributions suggests a considerable tendency towards endemism with small ranges, and we can therefore expect to find several more species with further collecting, particularly in remote areas in South America yet to be sampled adequately.

### METHODS

The material examined belongs to the following institutions: American Museum of Natural History, New York (AMNH); The Natural History Museum, London (BMNH); California Academy of Sciences, San Francisco (CAS); Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Brazil (MCN); Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil (MCTP); Museum of Comparative Zoology, Cambridge, Massachusetts (MCZ); Muséum National d'Histoire Naturelle, Paris (MNHN); Museu Nacional do Rio de Janeiro, Brazil (MNRJ); Museu Paraense Emílio Göeldi, Belém, Pará, Brazil (MPEG); Museu de Zoologia da Universidade de São Paulo, Brazil (MZSP); Peabody Museum of Natural History, Yale University, New Haven, Connecticut (PMNH); Coleção do Departamento de Zoologia da Universidade Federal de Brasília, Distrito Federal (UnB).

The nomenclature of the male palpus and female epigynal structures follows Sierwald (1989), Carico (1993, 2005a, 2005b), Silva & Lise (2006), and Silva et al. (2006, 2007). To study some of the epigyna, the soft tissue was removed by a combination of dissection with a small surgical blade and immersion in 10% KOH for 12 h at 25° C. The scanning electron micrographs (SEM) were made with a Philips XL 30 of Centro de Microscopia e Microanálises (CEMM) of

Pontificia Universidade Católica do Rio Grande do Sul (PUCRS). All the measurements are in millimeters. Differences in drawing styles in this article are the result of difficulties in international exchange of specimens for study.

The following abbreviations are used throughout the manuscript: AME, anterior median eye; ALE, anterior lateral eye; CO, copulatory ducts; DD, dorsal division of median apophysis; DT, distal tooth of median apophysis; ECD, ectal division of retrolateral tibial apophysis (RTA); END, ental division of RTA; G, guide; HS, head of spermathecae; LC, lower claw; LL, lateral lamella; LP, lateral projection of RTA; MF, middle field of epigynum; MOQ, median ocular quadrangle; PLE, posterior lateral eye; PME, posterior median eye; RTA, retrolateral tibial apophysis; S, spermatheca; ST, subtegulum; T, tegulum; TO, tarsal organ; UC, upper claw; VD, ventral division of median apophysis; VP, ventral protuberance of male palpal tibia.

## TAXONOMY

### Family Trechaleidae Simon 1890

**Diagnosis.**—The spider family Trechaleidae can be diagnosed as follows: eyes arranged in two rows, presence of a tibial apophysis and a ventrodiscal refolded rim on male palpal tibia; male palpus with a large median apophysis with a dorsal embolic groove extending into the guide; female epigynum generally heavily sclerotized, dark and opaque, the epigynal plate is conspicuous and the anterior field wide and usually distinct from the lateral lobes and the female builds a discoid and flattened egg sac, fixed and carried on the spinnerets (Carico 1993).

#### Genus *Enna* O. Pickard-Cambridge 1897

*Enna* O. Pickard-Cambridge 1897:232, figs. 13 a, b, c; Roewer 1954:113; Bonnet 1956:1656-1657; Carico 1986:305; Sierwald 1990:8; Carico 1993:226; Sierwald 1993:63; Platnick 2007.

**Type species.**—*Enna velox* O. Pickard-Cambridge 1897, by original designation.

**Diagnosis.**—This genus resembles *Dosseus* Simon, 1898 by the general shape of the dorsal division of the median apophysis which is concave and ends in an acute guide (Figs. 9, 10) and by the tarsi and metatarsi that are short and straight compared to the long and flexible tarsi of *Trechalea* Thorell 1869 and *Trechaleoides* Carico 2005. The dorsal division of the median apophysis is always larger than the ventral division and is usually concave. The guide of the distal portion of the dorsal division of the median apophysis is curved, directed retrolaterally, and narrowed to an acute point. The ventral division of the median apophysis is absent or extremely reduced, e.g., *E. estebanensis* (Simon), *E. colonche* new species and *E. caliensis* new species (Figs. 58, 59, 67, 81, 82). The ectal division of the retrolateral tibial apophysis is prominent, generally with a small lateral translucent but sclerotized projection (LP, Fig. 1). The middle field of the epigynum is conspicuous, hood-like, concave beneath, and comprises part of the dorsal rim of the epigastric furrow. Internally, each side of the epigynum has a large, conspicuous globose dorsal spermatheca and a small ventral spermatheca (Fig. 2).

**Description.**—Carapace moderately high (Figs. 63, 86, 98). Anterior eye row straight to moderately recurved, posterior recurved (Figs. 6, 17, 62, 85, 99, 133). Cheliceral paturon usually enlarged in males, some species with conspicuous lateral carina (Figs. 63, 134); females with setaceous chelicerae. Promargin and retromargin of left cheliceral fang furrow with three teeth equidistant and equal in size, some species present four teeth on right promargin (Fig. 136). Leg lengths variable, usually leg III smallest; all tarsal claws pectinated, number of teeth on upper claws varying from eight to thirteen and lower claw with only one long and slender tooth (Figs. 28, 29, 56, 96, 111, 143). Tarsal organ conspicuous (Figs. 52, 53, 108, 109, 139, 140). Ventral pairs of macrosetae on tibiae: I-4; II-4; III-3; IV-3 or 4 (Figs. 51, 131, 132). Bothrium of trichobothria with conspicuous hood (Figs. 26, 27, 55, 110, 141).

Male palpus (Figs. 1, 2) with rounded and concave median apophysis (Fig. 1), its dorsal division is curved. Guide pointed retrolaterally and acuminate (Fig. 1). Ventral division of the median apophysis absent in some species (Figs. 9, 13, 35, 73, 90, 93) and conspicuous (Figs. 100, 104, 114, 117) or extremely reduced (Figs. 58, 67, 81). Retrolateral tibial apophysis prominent, ectal division prominent, with a small translucent lateral projection (LP) (Figs. 95, 106); ental division usually smaller than ectal division (Figs. 8, 14, 34, 59, 66, 73, 80). Female epigynum, small, with middle field convex or elevated with posterior margin slightly projected (Figs. 11, 45, 61, 70, 84, 150); spermatheca longer than wide, head of spermatheca with rounded or elliptical shape (Figs. 10, 15, 19, 38, 41, 60, 69, 83, 149).

**Distribution.**—Members of this genus have been found in North America (southern Mexico) and Central America (Panama, Ecuador, Honduras, Costa Rica) to northern South America (Peru, Bolivia, Colombia, Venezuela, Brazil) (Figs. 4, 5).

**Natural history.**—Based on the collection data on the labels with some species, these spiders seem to inhabit wet areas near rivers and small rocky streams.

#### *Enna velox* O. Pickard-Cambridge 1897

Figs. 4, 6–11

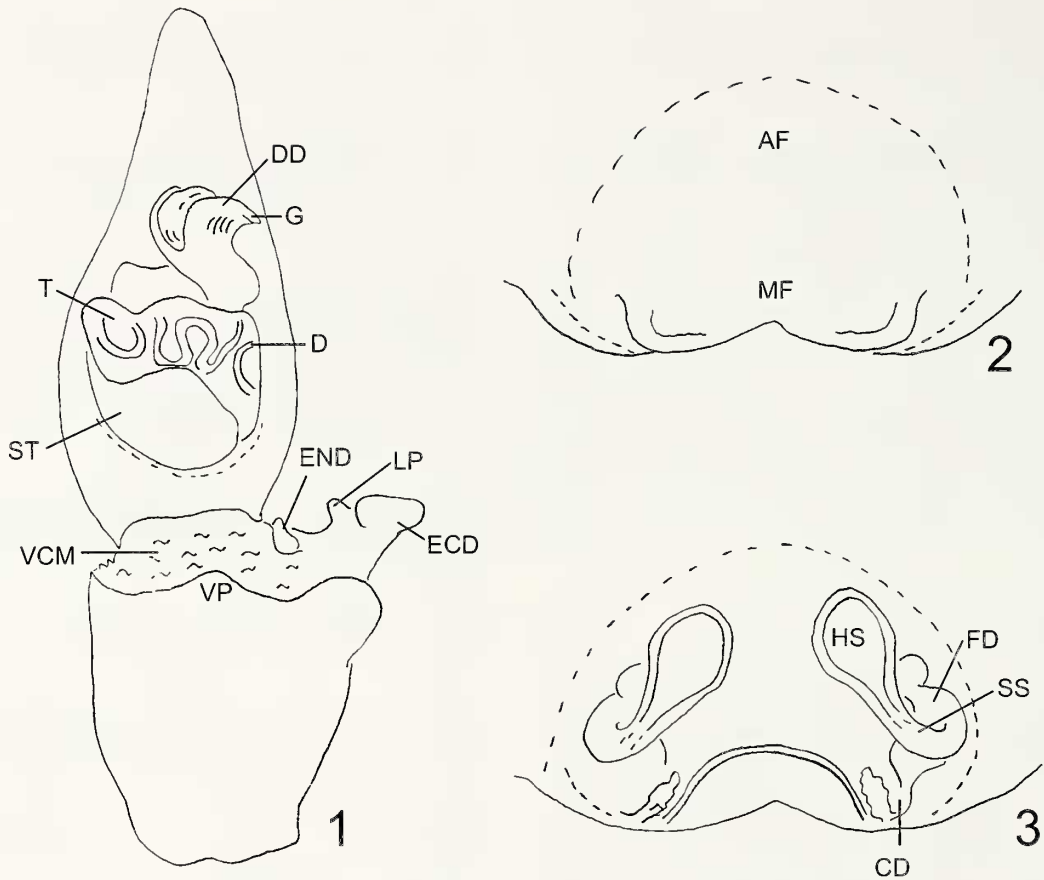
*Enna velox* O. Pickard-Cambridge 1897:232, figs. 2, 3, F.O. Pickard-Cambridge 1901:311, figs. 13, 14; Simon 1903:1046; Banks 1909:215; Petrunkevitch 1911:544; Petrunkevitch 1928:101; Roewer 1954:113; Bonnet 1956:1657; Platnick 2007.

**Type material.**—Male holotype: MEXICO: *Tabasco*: Teapa, 21°52'N, 102°55'W, H.H. Smith (BMNH 1905.4.28.864-873). Female paratype: same data as holotype (BMNH 1905.4.28.864-873).

**Diagnosis.**—This is the only species of *Enna* in which males have a small distal tooth (DT) on the guide (Figs. 8, 9). The lateral projection of the ectal division of the retrolateral tibial apophysis (RTA) is large compared to the size of ental division of RTA and acuminate (Fig. 7). This is the only species in which the female epigynum has the posterior margin medially indented, with two sinuous paramedian grooves (Fig. 11).

**Description.**—*Male (holotype)*: Carapace (Fig. 6), 4.10 long, 3.50 wide, brown, darker on cephalic area, with indistinct submarginal lighter bands that do not extend





Figs. 1-3.—Diagrammatic genitalia of *Enna*. 1. Left male palpus, ventral view; 2, 3. Female genitalia; 2. Ventral view; 3. Dorsal view. Abbreviations: AF, anterior field of epigynum; CD, copulatory duct; D, duct; DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis; END, ental division of retrolateral tibial apophysis; FD, fertilization duct; G, guide; HS, head of spermathecae; LP, lateral projection of ECD; MF, middle field of epigynum; SS, stalk of spermathecae; ST, subtegulum; T, tegulum; VD, ventral division of median apophysis; VCM, ventral cymbio-tibial membrane; VP, ventral protuberance of male palpal tibia.



Fig. 4.—Distribution of *Enna* species in Central America.

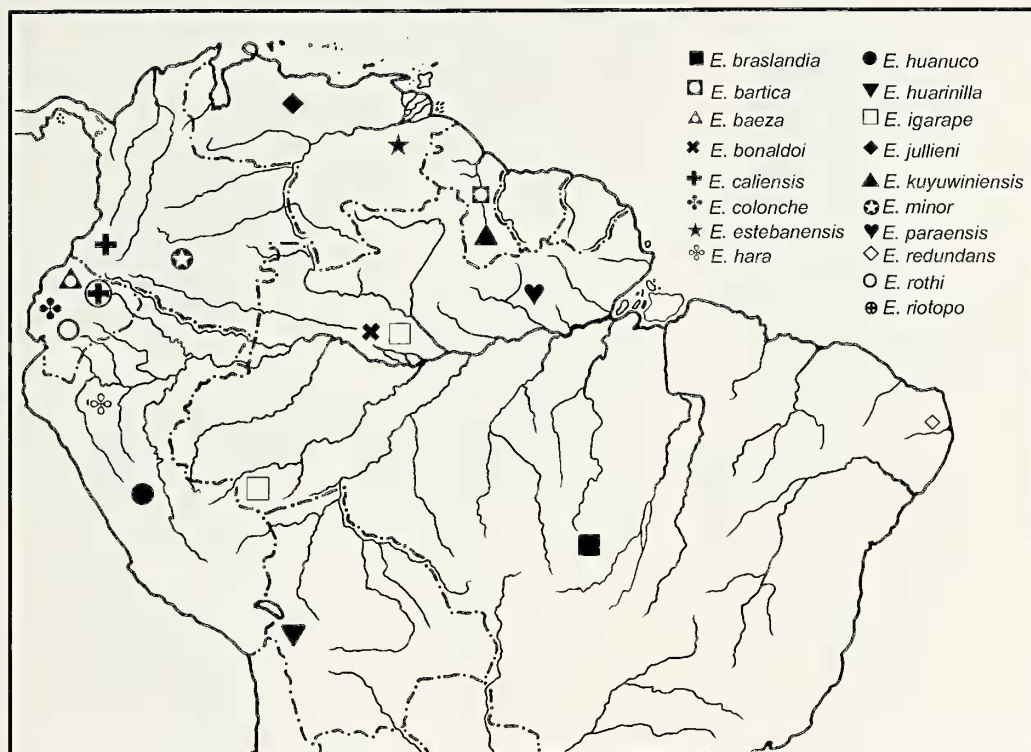


Fig. 5.—Distribution of *Enna* species in South America.

posteriorly, three light spots on each lateral margin (Fig. 6). Clypeus dark brown, lighter medially, 0.40 high. Anterior eye row straight, 1.04 wide; posterior 1.86 wide. Eye diameters, interdistances, and median ocular quadrangle: AME 0.27, ALE 0.19, PME 0.27, PLE 0.30; AME–AME 0.15, AME–ALE 0.05, PME–PME 0.56, PME–PLE 0.34, MOQ, 0.67 long, frontal view, anterior width 0.70, posterior width 1.04. Chelicerae reddish brown, slightly lighter distally, enlarged anteriorly with a flattened area above fangs, without lateral carina; promargin and retromargin of fang furrow with three teeth equidistant and equal in size. Sternum light brown, darker at margins; 1.90 long, 1.92 wide. Labium brownish, lighter at anterior margin, darker laterally; 1.28 long, 0.76 wide. Legs light brown, relative length: I–IV–II–III, I – femur 4.60/ tibia-patella 6.50/ metatarsus 4.80/ tarsus 2.20/ total 18.10; II – 4.60/ 6.20/ 4.50/ 1.90/ 17.20; III – 3.70/ 4.60/ 3.60/ 1.50/ 13.40; IV – 4.50/ 5.70/ 5.20/ 2.00/ 17.40. Abdomen dorsum and sides with very faint light markings due to age of preserved specimen (Fig. 6). Venter light brown, scattered setae. Ventral division of median apophysis absent (Figs. 8, 9); guide with a small tooth distally (Fig. 9). Retrolateral tibial apophysis (RTA) prominent, ectal division rounded at apex (Fig. 7); ental division small and subtriangular (Fig. 8).

*Female (paratype)*: Carapace 3.60 long, 3.61 wide, light brown, darker anteriorly, indistinct submarginal lighter bands. Clypeus dark brown, lighter at anterior-medial margin, 0.28 high. Anterior eye row straight, 0.94 wide; posterior 1.70 wide. AME 0.25, ALE 0.21, PME 0.30, PLE 0.29; AME–AME 0.13, AME–ALE 0.04, PME–PME 0.48, PME–PLE 0.30, MOQ, 0.63 long, frontal view, anterior width 0.58, posterior width 0.94. Chelicerae: reddish brown; promargin of fang furrow with three teeth, middle largest, proximal smallest, retro-

margin with three teeth equidistant and equal in size. Sternum light brown, darker at margins; 0.86 long, 0.91 wide. Labium light brown, lighter at anterior margin, darker laterally at base; 0.40 long, 0.34 wide. Legs light brown, I – missing; II – femur 4.50/ tibia-patella 5.90; III – femur 4.00/ tibia-patella 4.50/ metatarsus 3.50/ tarsus 1.50/ total 13.50. Abdomen dorsum light and with indistinct pattern, mostly devoid of setae except at antero-dorsal margin. Epigynum with anterior field wide, middle field elevated with two small projections on posterior margin (Fig. 11). Spermathecae short, rounded at apex (Fig. 10).

**Distribution.**—This species has only been collected from a single location in Mexico (Tabasco) (Fig. 4).

#### *Enna eberhardi* new species

Figs. 4, 12–16

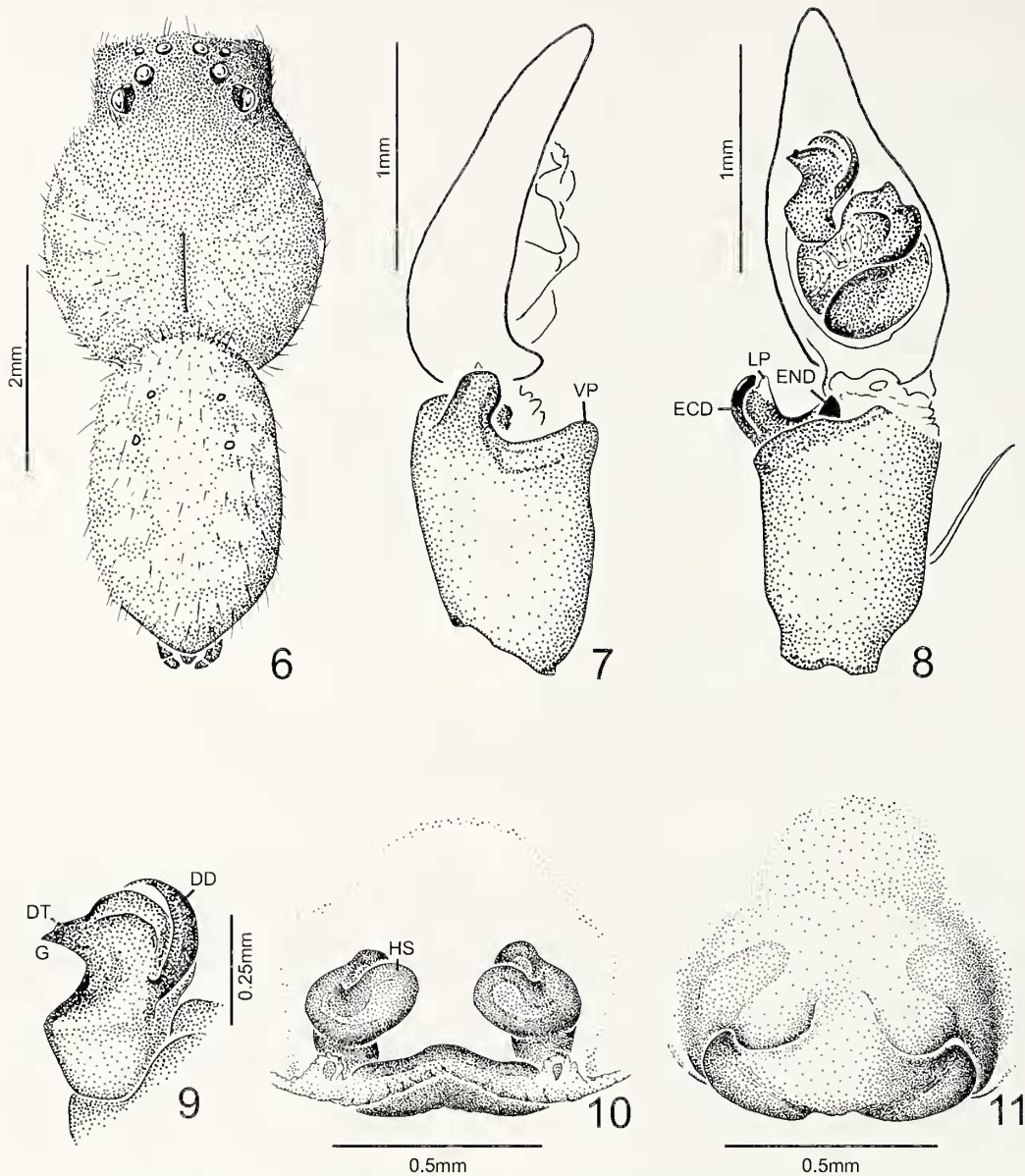
**Type material.**—Holotype male, PANAMA: Boquete, 10°07'N, 85°21'W, 14 August 1983, W. Eberhard et al. (MCZ 69711). Female paratype, same locality as holotype (MCZ 69712).

**Other material examined.**—COSTA RICA: *San Jose*: 4 ♀, San Antonio de Iscazu, 10°58'N, 85°08'W, July 1983, W. Eberhard (MCZ 67209, 67211, 67212, 67213), 1 ♀ same data except 14 August 1983, J.E. Carico (MCZ 69713); *Bajo la Hondura*: 1 ♀, Braulio Carrillo, 26 July 1983, W. Eberhard (MCZ63819).

**Etymology.**—The specific name is a patronym in honor of the collector of the types, W.G. Eberhard.

**Diagnosis.**—The males of *E. eberhardi* are similar to those of *E. velox* in the general shape of the median apophysis (Figs. 7–9), but can be distinguished by the absence of the distal tooth on the guide (Figs. 13, 14) and the shorter ectal division of the



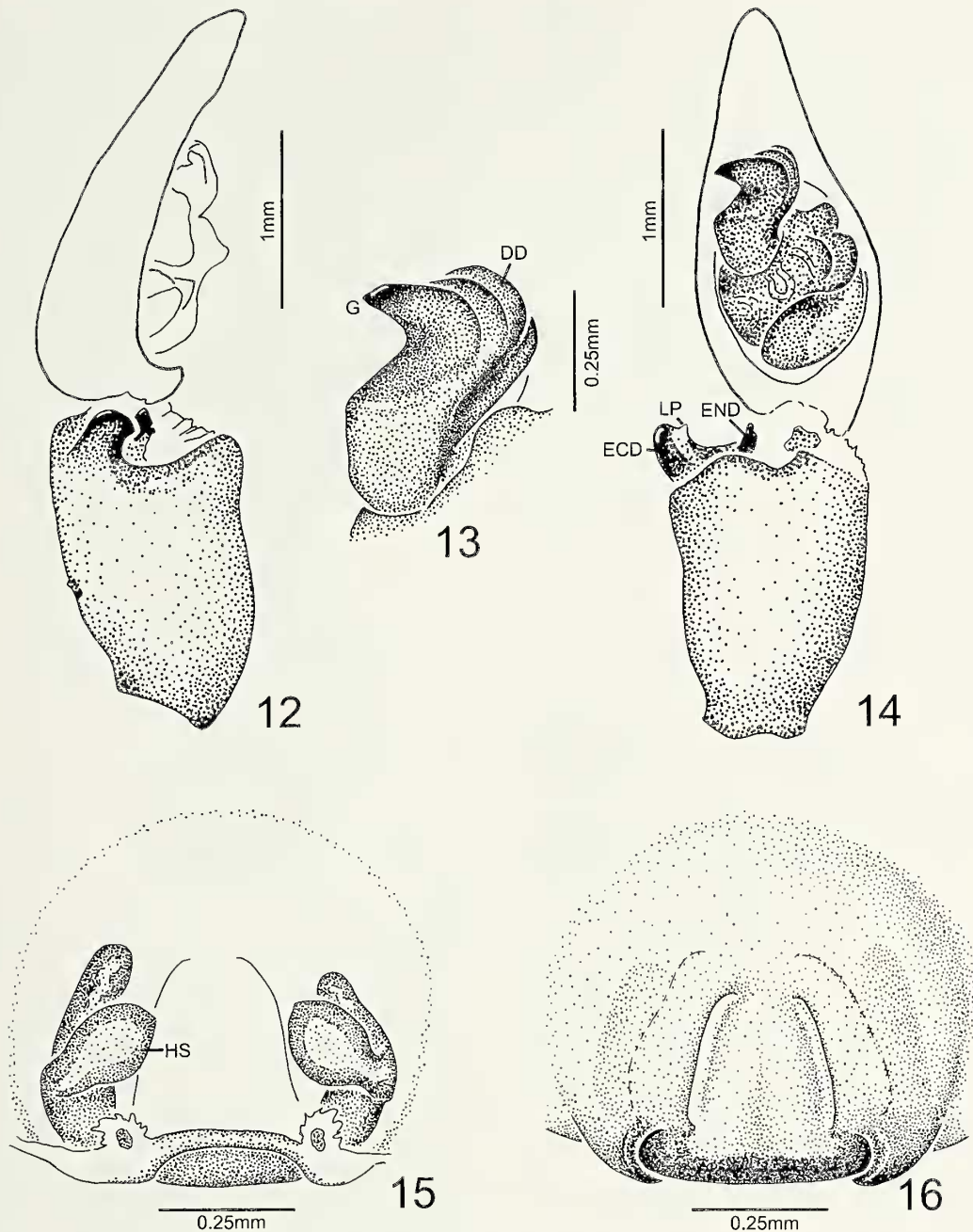


Figs. 6-11.—*Emma velox*. 6. Male, dorsal view. 7-9. Right male palpus: 7. Retrolateral view; 8. Ventral view; 9. Detail of median apophysis. 10, 11. Epigynum: 10. Dorsal view; 11. Ventral view. Abbreviations: DD, dorsal division of median apophysis; DT, distal tooth of median apophysis; G, guide; HS, head of spermathecae; LP, lateral projection of RTA; ECD, ectal division of RTA; END, ental division of RTA; VP, ventral protuberance of male palpal tibia.

retrolateral tibial apophysis (Fig. 12). The female epigynum is flattened, straight and smooth at the posterior margin, bearing two rounded projections laterally (Fig. 16).

**Description.**—*Male (holotype)*: Carapace 3.90 long, 3.20 wide, brown, darker on cephalic area, with indistinct submarginal lighter bands, three light spots on each lateral margin. Clypeus brownish, lighter medially, 0.30 high. Anterior eye row straight to slightly recurved, 0.94 wide; posterior 1.66 wide. AME 0.20, ALE 0.14, PME 0.28, PLE 0.30; AME-AME 0.12, AME-ALE 0.04, PME-PME 0.40, PME-PLE 0.25, MOQ, 0.58 long, frontal view, anterior width 0.55, posterior width 0.92. Chelicerae expanded anteriorly, without flattened area or lateral carina, reddish brown, slightly lighter distally; promargin with three teeth, middle

largest and retromargin of left cheliceral fang furrow with three teeth equidistant and equal in size on right side and one retromarginal on right one. Sternum light brown, darker at margins; 3.70 long, 3.50 wide. Labium light brown, lighter at anterior margin, darker laterally; 0.80 long, 0.65 wide. Legs light brown, relative length: I-II-IV-III, I - femur 4.50/ tibia-patella 6.20/ metatarsus 4.70/ tarsus 2.00/ total 17.40; II - 4.70/ 6.20/ 4.60/ 1.90/ 17.40; III - 3.90/ 4.70/ 3.70/ 1.40/ 13.70; IV - 4.60/ 5.70/ 5.40/ 1.90/ 17.00. Abdomen rounded, dorsum light brown with three parallel longitudinal light marks anteriorly and six pairs of light spots posteriorly, sides with scattered light marks. Venter light, with scattered setae. Palpus with small lateral projection (LP), almost same size of ental division of retrolateral tibial apophysis (Fig. 14). Retrolateral tibial



Figs. 12–16.—*Enna eberhardi*. 12–14. Right male palpus: 12. Retrolateral view; 13. Detail of median apophysis; 14. Ventral view. 15, 16. Epigynum: 15. Dorsal view; 16. Ventral view. Abbreviations: DD, dorsal division of median apophysis; G, guide; HS, head of spermathecae; LP, lateral projection of RTA; ECD, ectal division of RTA; END, ental division of RTA.

apophysis prominent, ectal division with curved apex (Fig. 12).

*Female (paratype)*: Carapace 3.30 long, 2.90 wide, light brown, dark on cephalic area, indistinct submarginal lighter bands, except posteriorly and three light spots on each lateral margin. Clypeus light brown, lighter medially, 0.26 high. Anterior eye row straight to slightly recurved, 0.86 wide; posterior 1.66 wide. AME 0.20, ALE 0.14, PME 0.24, PLE 0.30; AME–AME 0.12, AME–ALE 0.06, PME–PME 0.50, PME–PLE 0.30, MOQ, 0.58 long, frontal view, anterior width 0.86, posterior width 0.96. Chelicerae reddish brown, slightly lighter distally; promargin with three teeth, middle largest and

retromargin of right cheliceral fang furrow with three teeth equidistant and equal in size. Sternum light brown, darker at margins; 1.54 long, 1.60 wide. Labium brownish, lighter at anterior margin, darker laterally; 0.66 long, 0.60 wide. Legs light brown, indistinct maculae dorsally, relative length: I–IV–II–III, I – femur 3.60/ tibia-patella 5.00/ metatarsus 3.40/ tarsus 1.50/ total 13.50; II – 3.70/ 4.70/ 3.20/ 1.40/ 13.00; III – 3.20/ 3.70/ 2.80/ 1.20/ 10.90; IV – 3.70/ 4.40/ 3.90/ 1.50/ 13.50. Abdomen, rounded, dorsum dark brown with three pairs of light spots, sides diffuse and with scattered light brown spots. Venter light brown, with scattered setae. Epigynum with posterior margin straight, middle field with two concave



grooves (Fig. 16). Spermathecae short and head of spermathecae elliptical (Fig. 15).

**Variation.**—Five females, carapace length 2.8–3.5; 2.4–2.9 wide.

**Distribution.**—This species is only known from Panama (Boquete) and Costa Rica (San Jose) (Fig. 4).

**Remarks.**—The male holotype is missing right leg I. The female allotype is missing right leg IV.

*Enna nesioties* Chamberlin 1925

Figs. 4, 17–19

*Enna nesioties* Chamberlin 1925:224; Roewer 1954:113; Bonnet 1956:1657; Platnick 2007.

**Type material.**—Holotype female: PANAMA: Barro Colorado Island, 09°09'N, 79°50'W, W.C. Allee (MCZ 1290).

**Diagnosis.**—The females of *E. nesioties* can be distinguished from the other females of *Enna* by bearing two rounded deep excavations in the middle field of the epigynum (Fig. 18).

**Description.**—*Female (holotype)*: Carapace (Fig. 17) 3.50 long, 3.00 wide, dark brown, lighter on cephalic area, irregular, lighter sub-marginal bands, three light spots on each lateral margin. Clypeus brown, lighter medially, 0.28 high. Anterior eye row straight, 0.92 wide; posterior 1.70 wide. AME 0.22, ALE 0.18, PME 0.28, PLE 0.30; AME–AME 0.13, AME–ALE 0.04, PME–PME 0.49, PME–PLE 0.30, MOQ, 0.64 long, frontal view, anterior width 0.55, posterior width 0.98. Chelicerae light reddish brown, slightly lighter distally; promargin with three teeth, middle largest and retromargin of fang furrow with three teeth equidistant and equal in size. Sternum light brown, darker on margins; 1.54 long, 1.60 wide. Labium brown, lighter on anterior margin, darker laterally; 0.70 long, 0.64 wide. Legs light brown, alternating light and dark bands, darker dorsally, relative length: IV–I–II–III, I – femur 3.60/ tibia-patella 5.00/ metatarsus 3.40/ tarsus 1.60/ total 13.60; II – 3.70/ 5.00/ 3.40/ 1.50/ 13.60; III – 3.20/ 3.90/ 2.90/ 0.80/ 10.80; IV – 3.80/ 4.50/ 4.00/ 1.50/ 13.80. Abdomen dorsum light brown at cardiac area, parallel series of light spots lateral to cardiac area and sides with scattered light setae (Fig. 17). Venter light brown with scattered setae. Epigynum with posterior margin slightly projecting (Fig. 18); spermathecae rounded and narrower distally (Fig. 19).

**Distribution.**—This species is known only from the type locality in Panama (Fig. 4).

*Enna chickeringi* new species

Figs. 4, 20, 21

**Type material.**—Female holotype: HONDURAS: Lantilla, 15°42'N, 87°28'W, 19 July 1929, A.M. Chickering (MCZ 63821). Paratype: 1 female, same locality as holotype (MCZ 63822).

**Etymology.**—The specific name is a patronym in honor of the collector of the type, A.M. Chickering.

**Diagnosis.**—The female of *E. chickeringi* is similar to that of *E. colonche* by having an excavation on the posterior margin of the epigynum (Fig. 61), but can be distinguished by bearing a heavily sclerotized margin and having a deeper excavation on the posterior margin (Fig. 21).

**Description.**—*Female (holotype)*: Carapace 2.80 long, 2.50 wide, pale brown. Clypeus light brown, 0.22 high. Anterior eye row straight, 0.57 wide; posterior 1.46 wide. AME 0.18, ALE

0.12, PME 0.24, PLE 0.27; AME–AME 0.13, AME–ALE 0.03, PME–PME 0.46, PME–PLE 0.24, MOQ, 0.45 long, dorsal view, frontal view 0.50, anterior width 0.52, posterior width 0.82. Chelicerae reddish-brown; promargin with three teeth, median largest and retromargin of fang furrow with three equidistant and equal in size. Sternum dark brown 1.50 long, 1.40 wide. Labium light brown, yellowish at anterior margin; 0.60 long, 0.52 wide. Legs yellowish, without distinct pattern, relative length: I–IV–III, I – femur 3.10/ tibia-patella 4.40/ metatarsus 2.90/ tarsus 1.40/ total 11.80; II – missing; III – 2.80/ 3.30/ 2.40/ 1.00/ 9.00; IV – 3.10/ 3.80/ 3.30/ 1.50/ 11.70. Abdomen rounded, with scattered setae, dorsum brownish, with numerous whitish spots and paramedian brownish bands, yellowish laterally, venter light brown. Middle field of epigynum with two long paramedian grooves (Fig. 21); head of spermathecae short and circular (Fig. 20).

**Distribution.**—This species is known only from the type locality in Honduras (Fig. 4).

**Remarks.**—The holotype is missing right leg II.

*Enna minor* Petrunkevitch 1925

Figs. 4, 5, 22–29

*Enna minor* Petrunkevitch 1925:167, 168, fig. 68; Roewer 1954:113; Bonnet 1956:1656; Platnick 2007.

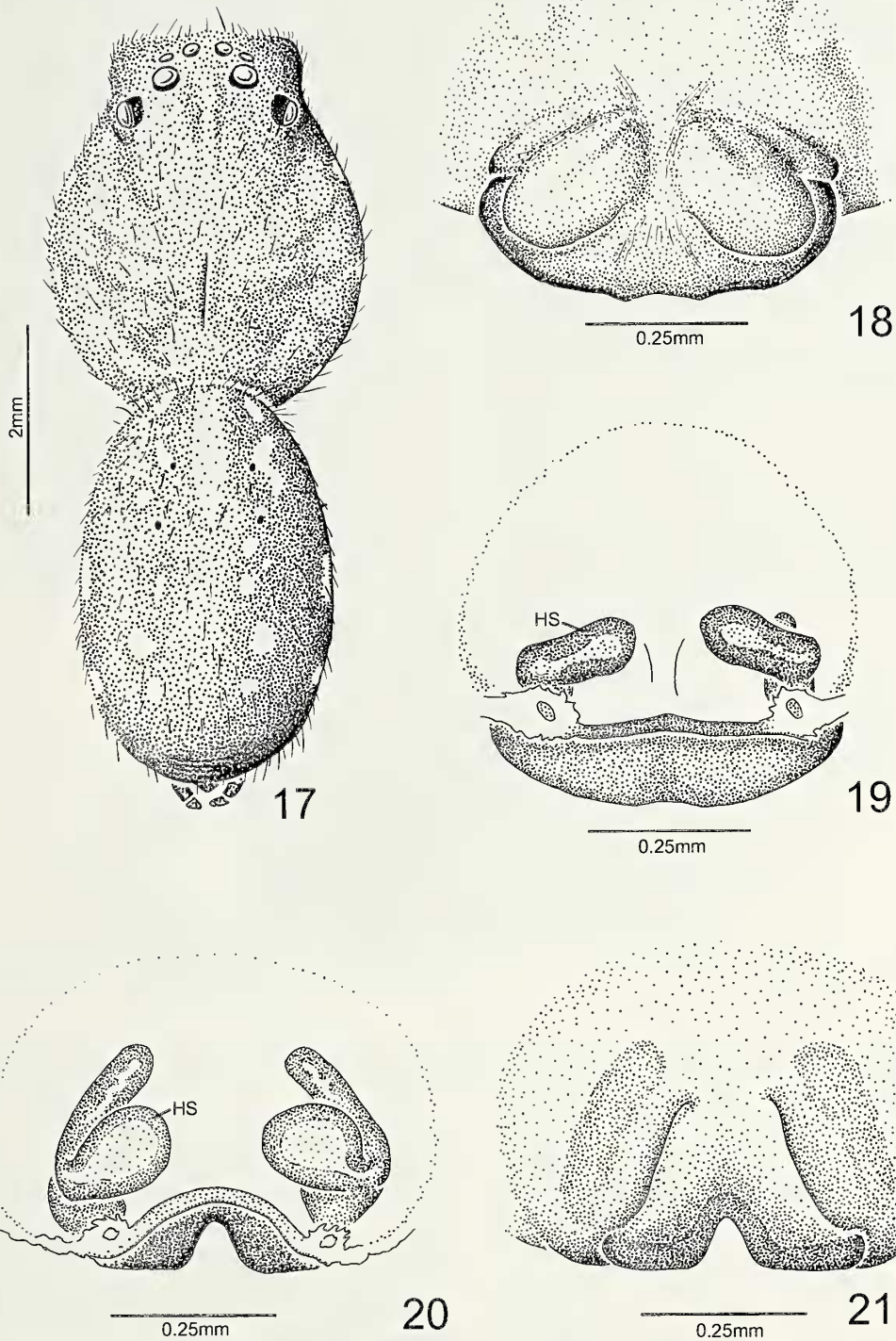
**Type material.**—Holotype female: PANAMA: Santiago, 08°06'N, 80°59'W (PMNH).

**Other material examined.**—COLOMBIA: *Departamento de Santander*: 1 ♀, Hacienda La Estrella, Quebrada, Oquina, 9°15'N, 73°34'W, 28 February 1959 (AMNH).

**Diagnosis.**—The female epigynum of *E. minor* (Fig. 23) is similar to that of *E. jullieni* (Fig. 32) by having a small projection on the middle field of the epigynum, but can be distinguished by a longer and narrower median projection on the posterior margin of the epigynum and by the two lateral projections fitted in a large, middle scape (Fig. 23).

**Description.**—*Female (holotype)*: Carapace (Fig. 22) 5.14 long, 4.81 wide; pale brown, darker laterally. Clypeus light brown, darker laterally, 0.40 high. Anterior eye row slightly recurved, 1.24 wide; posterior 2.13 wide. AME 0.24, ALE 0.22, PME 0.27, PLE 0.21; AME–AME 0.18, AME–ALE 0.12, PME–PME 0.55, PME–PLE 0.34, MOQ, 0.71 long, dorsal view, frontal view 0.74, anterior width 0.65, posterior width 1.12. Chelicerae reddish brown with thin and small brownish setae; promargin and retromargin of fang furrow with three subequal and equidistant teeth. Sternum yellowish with numerous light setae; 2.17 long, 2.48 wide. Labium orange, light at posterior margin; 0.62 long, 0.77 wide. Legs dark brown, femora with pale brown spots dorsally, relative length: I–IV–II–III, I – femur 7.22/ tibia-patella 9.71/ metatarsus 6.72/ tarsus 2.98/ total 26.63; II – 7.04/ 8.24/ 7.31/ 2.93/ 25.32; III – 6.05/ 6.88/ 5.47/ 3.15/ 21.55; IV – 7.71/ 9.70/ 9.04/ - / 26.45. Dorsal surface of legs with modified chemosensitive setae (Fig. 25). Trichobothria with distinct hood (Figs. 26, 27). Tarsal claw pectinated, upper claw with eleven teeth and lower claw with one short, slender tooth (Figs. 28, 29). Abdomen grayish, setaceous, light brown ventrally. Epigynum with posterior margin projected (Fig. 23); spermathecae long and slender; head of spermathecae rounded (Fig. 24).

**Distribution.**—This species is known from Panama and Colombia (Figs. 4, 5).



Figs. 17–21.—*Enna* spp. 17–19. *E. nesiotae*: 17. Female, dorsal view; 18. Epigynum ventral view; 19. Epigynum dorsal view. 20, 21. *E. chickeringi* epigynum: 20. Dorsal view; 21. Ventral view. Abbreviations: HS, head of spermathecae; LP, lateral projection of RTA.

*Enna jullieni* (Simon 1898)

Figs. 4, 5, 30–33

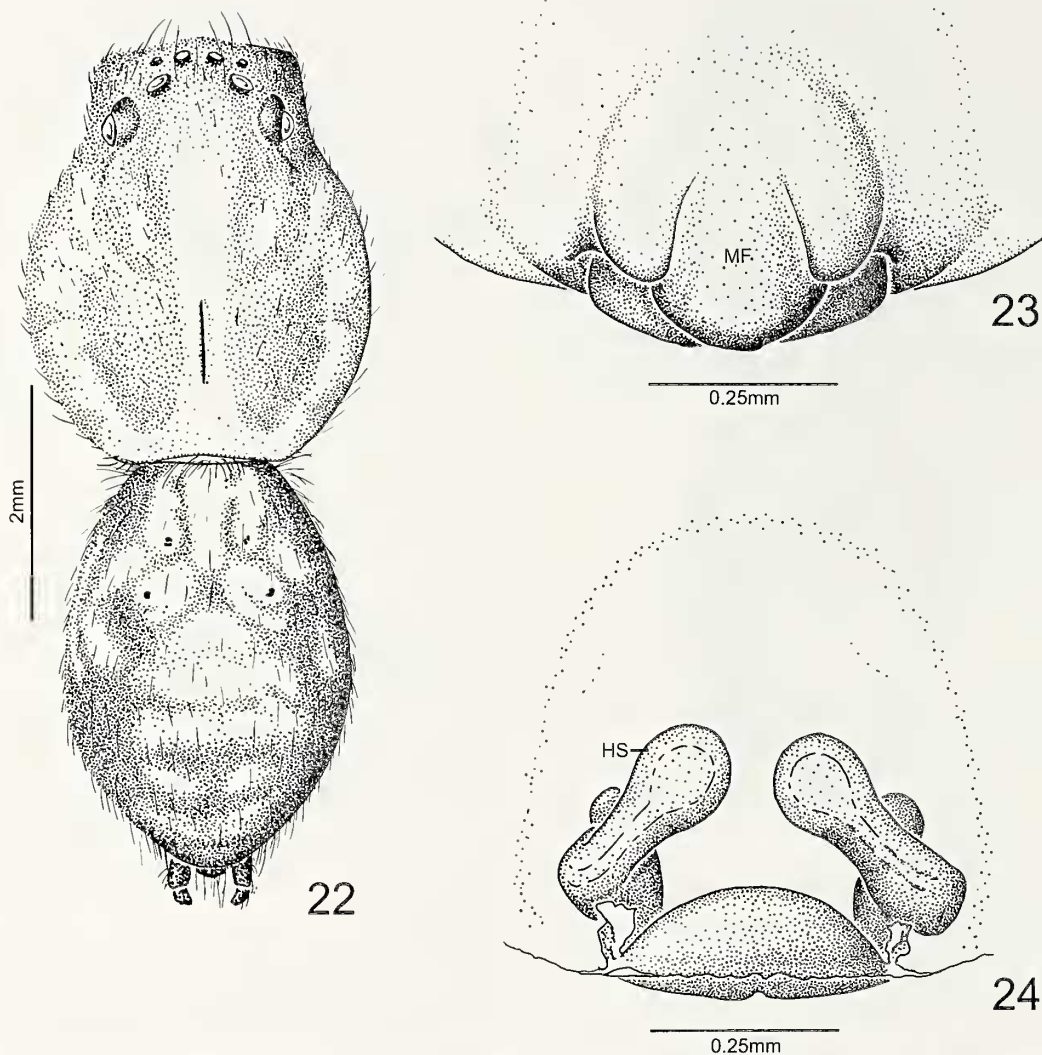
*Hesydrus jullieni* Simon 1898:20.

*Enna jullieni* (Simon): F.O. Pickard-Cambridge 1901:312;  
Roewer 1954:113; Bonnet 1956:1656; Platnick 2007.

**Type material.**—Holotype female: PANAMA: Obispo, Jullien (MNHN 9692).

**Other material examined.**—PANAMA: Jullien, 1 ♀ (MNHN 9692). COLOMBIA: *Antioquia*: 1 ♀, Mutatá, 07°14'N, 76°26'W, December 1963, P.B. Schneble (MCZ).





Figs. 22–24.—*Enna minor*. 22. Female, dorsal view; 23, 24. Epigynum: 23. Ventral view; 24. Dorsal view. Abbreviations: MF, middle field of epigynum; HS, head of spermathecae.

**Diagnosis.**—The female epigynum of *E. jullieni* (Fig. 32) is similar to that of *E. maya* (Fig. 39) by the shape of the middle field of the epigynum, but can be distinguished by the presence of a median scape-like projection, and by the middle field of the epigynum that is strongly projected (Fig. 31).

**Description.**—*Female (holotype)*: Carapace (Fig. 30) 3.01 long, 2.53 wide; grayish laterally. Clypeus yellowish, 0.25 high. Anterior eye row slightly recurved, 0.75 wide; posterior 1.42 wide. AME 0.17, ALE 0.12, PME 0.25, PLE 0.25; AME–AME 0.15, AME–ALE 0.06, PME–PME 0.40, PME–PLE 0.31, MOQ, 0.40 long, dorsal view, frontal view 0.49, anterior width 0.81, posterior width 0.45. Chelicerae orange with small light setae; promargin and retromargin of fang furrow with three teeth equal in size and equidistant. Sternum yellowish with brown setae; 1.32 long, 1.40 wide. Labium orange, darker on anterior margin; 0.55 long, 0.49 wide. Legs yellowish, relative length: IV-I-II-III, I – femur 3.21/ tibia-patella 4.32/

metatarsus 3.02/ tarsus 1.32/ total 11.87; II – 3.12/ 4.12/ 2.83/ 1.19/ 11.26; III – 2.53/ 3.10/ 2.42/ 1.03/ 9.08; IV – 3.23/ 3.81/ 3.60/ 1.24/ 11.88. Abdomen rounded, setaceous, grayish (Fig. 30); venter yellowish. Middle field of epigynum with two lateral elevations, posterior margin divided and slightly projected (Figs. 31, 32). Head of spermathecae rounded and curved at base (Fig. 33).

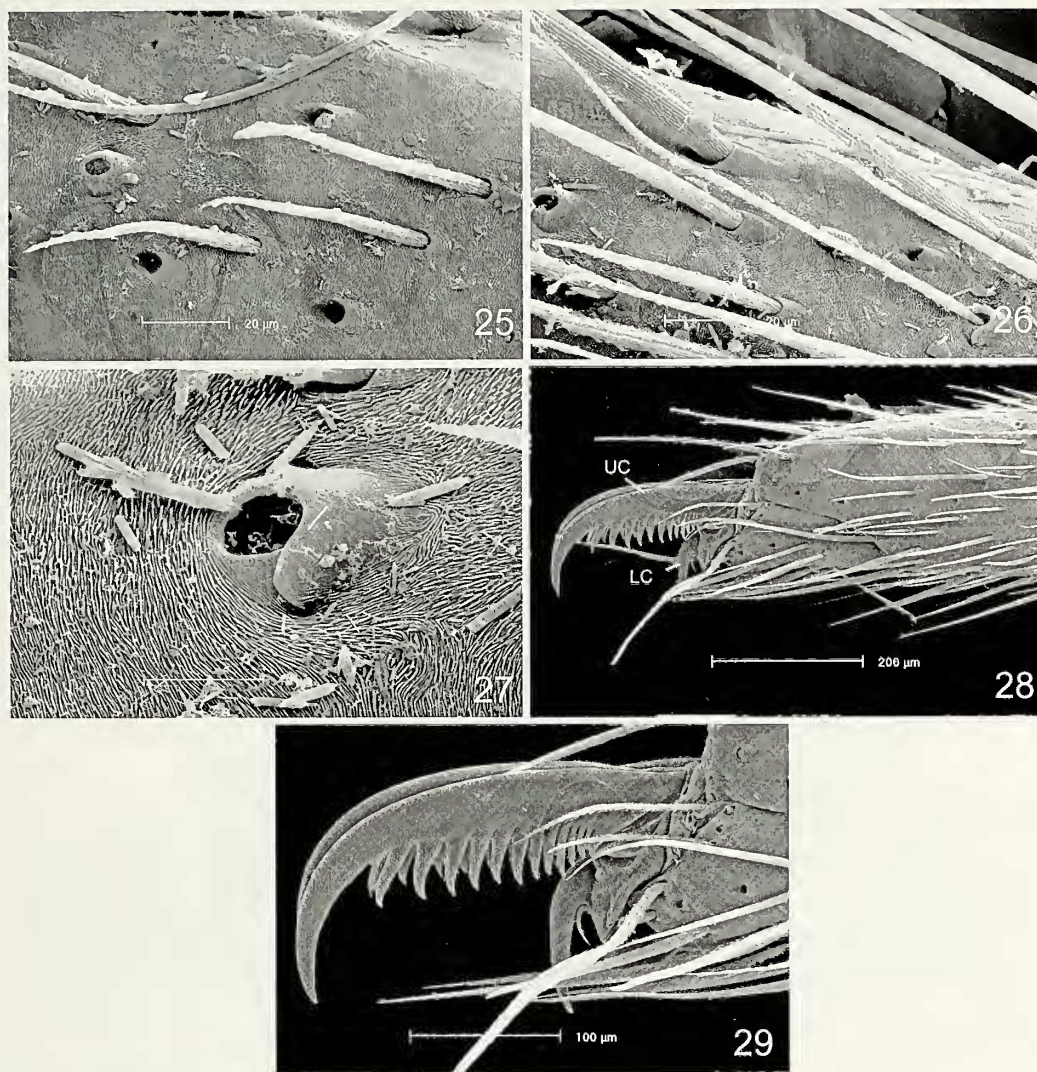
**Distribution.**—Panama, Colombia, Venezuela (Figs. 4, 5).

**Remarks.**—The holotype has the abdomen and carapace disarticulated, all legs are detached, and female left palpus missing.

*Enna braslandia* new species

Figs. 5, 34–36

**Type material.**—Holotype male: BRAZIL: Distrito Federal: Braslândia, “Labirinto da Lama,” 15°42’S, 48°13’W, 26 January 2004, F. Jordão (UnB 3097).



Figs. 25–29.—Morphological details of *E. minor*: 25. Chemosensitive setae on tarsus of leg IV; 26. General view of trichobothria on tarsus IV; 27. Bothrium; 28. Tarsal claw, general view; 29. Tarsal claw of leg IV. Abbreviations: LC, lower claw; UC, upper claw.

**Etymology.**—The specific name is a noun in apposition taken from the type locality.

**Diagnosis.**—The male palpus of *E. braslandia* (Figs. 35, 36) resembles that of *E. huanuco* (Fig. 73) by the shape of the lateral lamella (LL) of the median apophysis, but can be differentiated by a long, slender and acute guide.

**Description.**—*Male (holotype)*: Carapace 4.30 long, 3.50, yellowish, with indistinct submarginal band, lateral margins with three light brown spots; covered with short, dark, setae. Clypeus yellowish, 0.37 high. Anterior eye row straight, 0.92 wide; posterior 1.70 wide. AME 0.23, ALE 0.17, PME 0.30, PLE 0.33; AME–AME 0.10, AME–ALE 0.06, PME–PME 0.31, PME–PLE 0.35, MOQ, 0.64 long, dorsal view, anterior width 0.50, posterior width 0.84. Chelicerae dark reddish brown, irregular maculae on faces, lateral carina conspicuous on distal lateral third, no frontal flat surfaces; promargin with three teeth, middle largest; retromargin with three teeth, equal in length. Sternum pale yellow, 2.10 long, 1.90 wide. Labium dark brown, lighter on anterior margin, 0.84 long, 0.72 wide. Legs light yellow, alternating and indistinct dark markings on dorsal surface of femora, I – femur 6.10/ tibia-

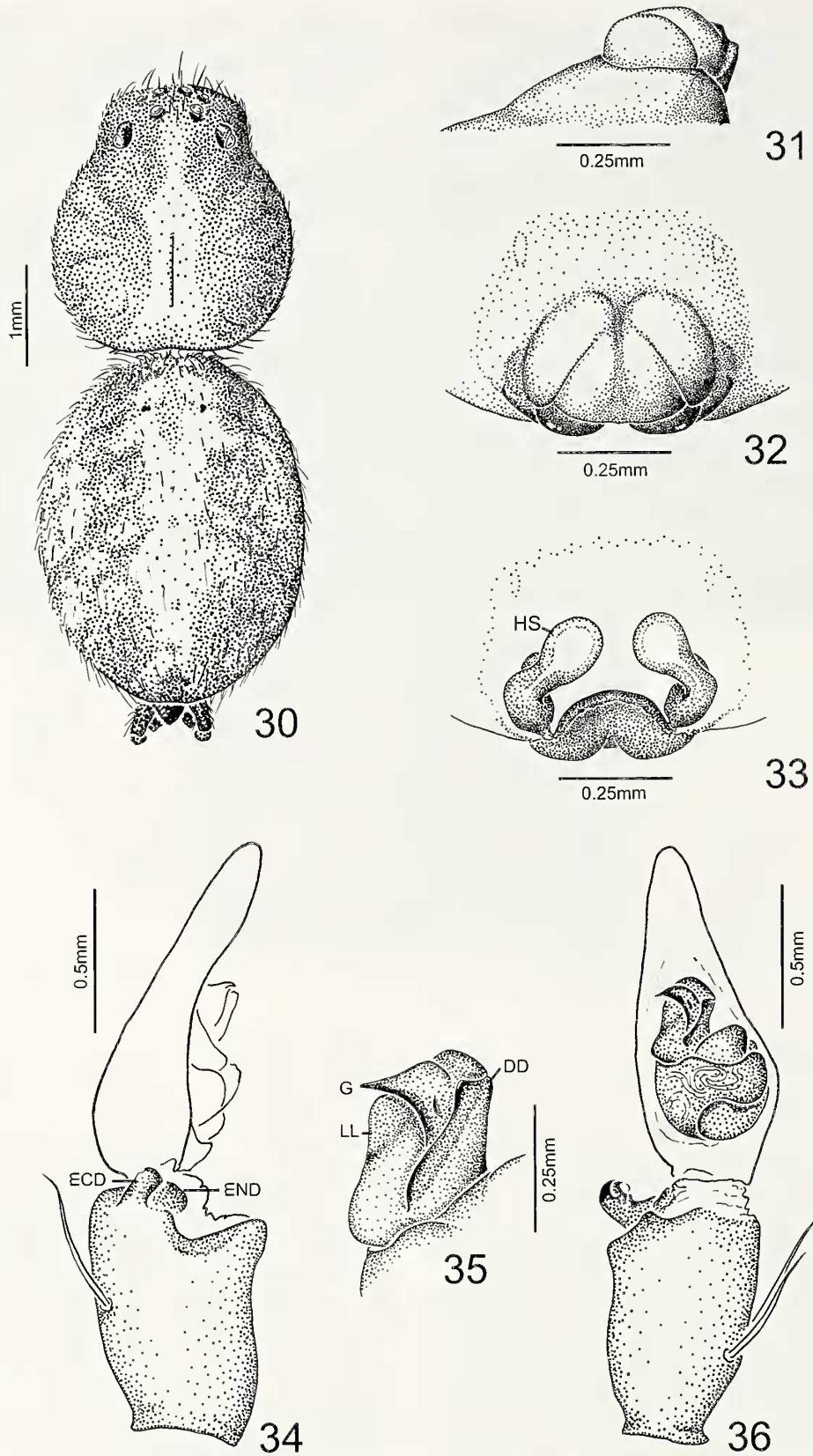
patella 8.80/ metatarsus 6.90/ tarsus 2.70/ total 24.50, II – 5.90/ 8.00/ 6.20/ 2.50/ 22.60, III – 4.60/ 5.30/ 4.30/ 1.70/ 15.90, IV – 5.90/ 7.00/ 7.20/ 2.50/ 22.60. Ventral pairs of macrosetae on tibiae: I-4, II-4, III-3, IV-4. Abdomen rounded, dorsum and sides light background color with diffuse pattern above and longitudinal bands laterally; ventrally, with many long dorsal setae, shorter ventrally. Palpus with ventral division of median apophysis absent; guide small and acuminate, without basal tooth (Figs. 35, 36). Retrolateral tibial apophysis with ectal division (ECD) prominent, rounded on apex (Fig. 34); lateral projection (LP) rounded. Ental division (END) small, bearing a semi-circular shape (Fig. 34).

**Distribution.**—This species is known only from the type locality in Brazil (Fig. 5).

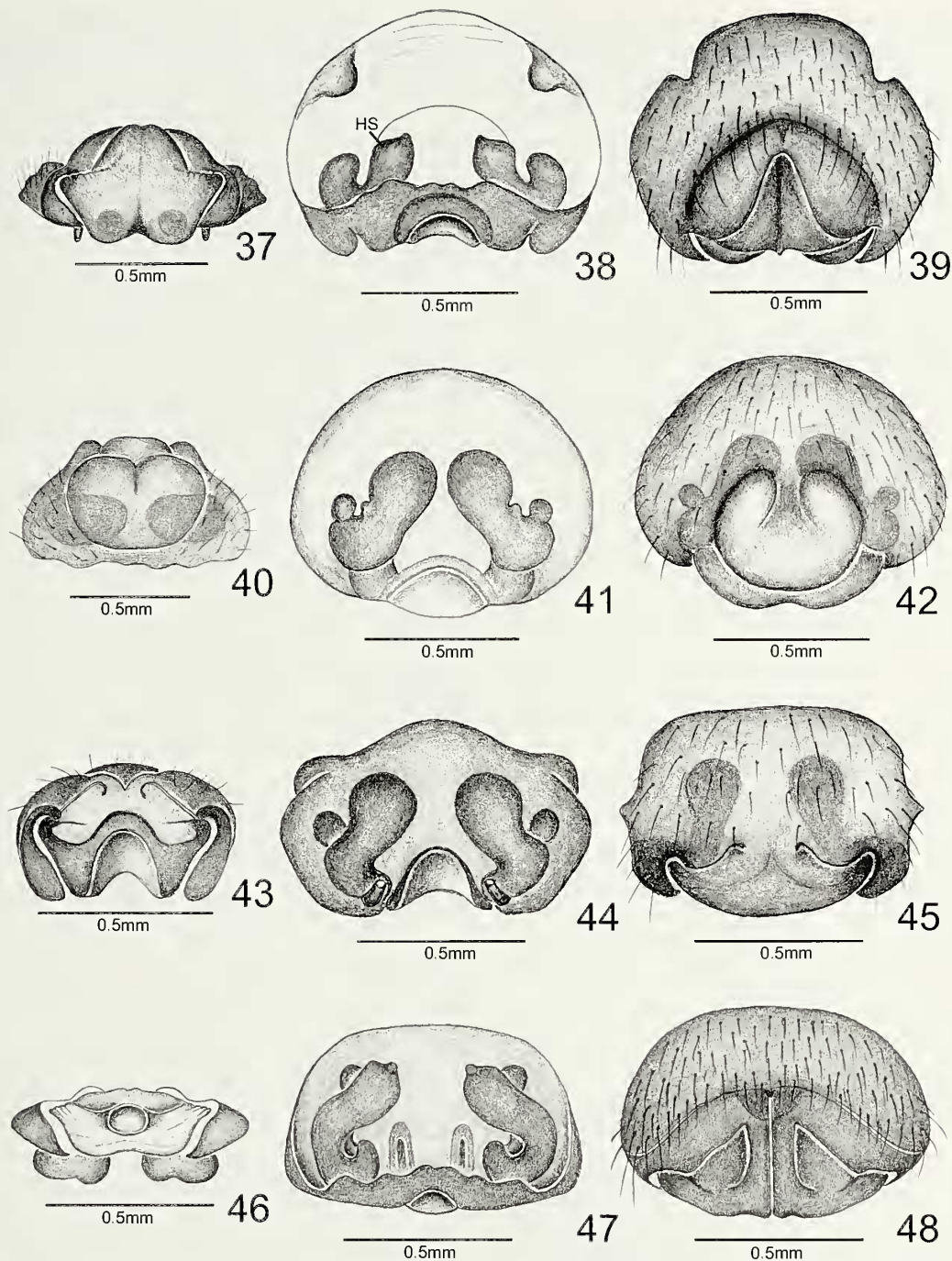
*Enna maya* new species  
Figs. 4, 37–39

**Type material.**—Holotype female, HONDURAS: Copan, 14°55'S, 88°55'W, 8 March 1939 (AMNH). Paratype: 1 female: COSTA RICA: N. Banks (MCZ 63820).





Figs. 30–36.—*Emma* spp. 30–33. *Emma jullieni*: 30. Female, dorsal view; 31–33. Epigynum: 31. Lateral view; 32. Ventral view; 33. Dorsal view. 34–36. *E. braslandia*, right male palpus: 34. Retrolateral view; 35. Detail of median apophysis; 36. Ventral view. Abbreviations: DD, dorsal division of median apophysis; G, guide; HS, head of spermathecae; LL, lateral lamella; ECD, ectal division of RTA; END, ental division of RTA.



Figs. 37-48.—*Enna* spp., female epigyna. 37-39. *E. maya*: 37. Posterior view; 38. Dorsal view; 39. Ventral view. 40-42. *E. pecki*: 40. Posterior view; 41. Dorsal view; 42. Ventral view. 43-45. *E. paraensis*: 43. Posterior view; 44. Dorsal view; 45. Ventral view. 46-48. *E. rothi*: 46. Posterior view; 47. Dorsal view; 48. Ventral view.

**Etymology.**—The specific name is a noun in apposition and refers to the Mayan civilization, occupant of the type locality in the 16th century.

**Diagnosis.**—The female of *E. maya* is similar to that of *E. jullieni* (Fig. 31) by having a ventrally projected epigynum (Fig. 37), but can be distinguished by the median marginal projection (Fig. 39) of the posterior margin of the epigynum and the small projections on the head of spermathecae (Fig. 38).

**Description.**—*Female (holotype)*: Carapace 4.39 long, 3.98 wide, orange, darker laterally. Clypeus dark brown, 0.31 high. Anterior eye row straight, 1.14 wide; posterior 2.07 wide. AME 0.27, ALE 0.15, PME 0.58, PLE 0.18; AME-AME 0.15. AME-ALE 0.12, PME-PME 0.55, PME-PLE 0.46, MOQ, 0.55 long, dorsal view, frontal view 0.65, anterior width 0.68, posterior width 1.48. Chelicerae orange with small light setae; promargin with three teeth equidistant, middle largest; retro-margin with three teeth equidistant, subequal in size. Sternum



pale brown with dark setae; 1.92 long, 1.89 wide. Labium reddish brown, darker on posterior margin, 0.71 long, 0.68 wide. Legs light brown, yellowish ventrally. relative length: I-IV-II-III, I – femur 4.15/ tibia-patella 6.05/ metatarsus 4.16/ tarsus 1.66/ total 16.02; II – 4.23/ 5.64/ 4.06/ 1.24/ 15.17; III – 3.81/ 4.39/ 3.32/ 1.07/ 12.59; IV – 3.90/ 5.39/ 4.39/ 1.74/ 15.42. Abdomen oval, grayish, setaceous, indistinct light brown pattern dorsally, grayish ventrally. Middle field of epigynum with a median irregular projection (Figs. 37, 39). Spermathecae small, rounded with distal projections (Fig. 38).

**Distribution.**—Honduras (Copan), Costa Rica (Fig. 4).

**Remarks.**—The material is badly preserved, with thin cuticle, left legs II and III missing, the left leg I missing the metatarsus and tarsus, and the left leg IV missing the tarsus.

*Enna pecki* new species  
Figs. 4, 40–42

**Type material.**—Holotype female: COSTA RICA: *Guana-caste Debris*: Potrero Bagaces river, 10°00'N, 84°00'W, 7 July 1966, S. Peck (AMNH).

**Etymology.**—The specific name is a patronym in honor of the collector of the type, S.B. Peck.

**Diagnosis.**—The female of *E. pecki* resembles those of *E. velox* (Fig. 11) by bearing a rounded scape-like projection on the middle field of the epigynum (Fig. 42), but can be distinguished by the larger and rounded head of the spermathecae (Fig. 41).

**Description.**—*Female (holotype)*: Carapace 2.93 long, 2.79 wide; brownish, dark brown laterally. Clypeus dark brown, 0.14 high. Anterior eye row straight, 0.76 wide; posterior 1.38 wide. AME 0.14, ALE 0.11, PME 0.21, PLE 0.16; AME–AME 0.06, AME–ALE 0.08, PME–PME 0.26, PME–PLE 0.14, MOQ, 0.40 long, dorsal view, frontal view 0.49, anterior width 0.43, posterior width 0.78. Chelicerae dark brown, sparse brownish setae; promargin with three teeth equidistant and equal in size, retromargin with three teeth, middle largest. Sternum yellowish with dark brown setae; 1.21 long, 1.06 wide. Labium light brown, lighter at posterior margin; 0.32 long, 0.31 wide. Legs yellowish, relative length: IV-II-I-III, I – femur 2.92/ tibia-patella 4.52/ metatarsus 2.93/ tarsus 1.33/ total 11.70; II – 3.05/ 4.53/ 3.05/ 1.46/ 12.09; III – 2.52/ 3.32/ 1.99/ 1.05/ 8.89; IV – 3.32/ 4.12/ 3.33/ 1.59/ 12.35. Abdomen brownish, dorsum with indistinct light spots, grayish ventrally. Posterior margin of epigynum elevated and heavily sclerotized (Figs. 40, 42). Stalk and head of spermathecae almost touching each other (Fig. 41).

**Distribution.**—This species is known only from the type locality in Costa Rica (Fig. 4).

**Remarks.**—The holotype is missing right legs I, II and III, and left leg IV is missing the metatarsus and tarsus.

*Enna paraensis* new species  
Figs. 5, 43–45

**Type material.**—Holotype female: BRAZIL: *Pará*: Ma-puerá river, 01°45'S, 55°51'W, 15 January 1938, H.G. Hassler (AMNH).

**Etymology.**—The specific name refers to the type locality.

**Diagnosis.**—The female of *E. paraensis* (Fig. 45) resembles those of *E. caliensis* (Fig. 84) by the shape of the projection of

the posterior margin of the epigynum, but can be distinguished by the rounded head of the spermathecae (Fig. 44).

**Description.**—*Female (holotype)*: Carapace 3.73 long, 3.32 wide, two paramedian yellow bands dorsally. Clypeus yellowish, brownish laterally, 0.27 high. Anterior eye row slightly recurved, 0.86 wide; posterior 1.76 wide. AME 0.18, ALE 0.12, PME 0.25, PLE 0.21; AME–AME 0.15, AME–ALE 0.07, PME–PME 0.53, PME–PLE 0.28, MOQ, 0.52 long, dorsal view, frontal view 0.66, anterior width 0.55, posterior width 1.03. Chelicerae orange with small setae, darker on anterior margin; promargin and retromargin of fang furrow with three teeth. Sternum yellowish with small dark brown setae; 1.66 long, 1.57 wide. Labium dark brown, lighter on posterior margin, 0.58 long, 0.49 wide. Legs yellowish, relative length: I-IV-II-III, I – femur 4.06/ tibia-patella 5.97/ metatarsus 3.98/ tarsus 1.82/ total 15.83; II – 3.98/ 5.88/ 3.73/ 1.74/ 15.33; III – 3.32/ 3.90/ 2.65/ 1.33/ 11.20; IV – 4.15/ 4.73/ 4.81/ 1.66/ 15.35. Abdomen setaceous, yellowish dorsally with sparse dark spots, lighter ventrally. Middle field of the epigynum with lateral sulci, posterior margin smooth (Fig. 43, 45).

**Distribution.**—This species is known only from the type locality in Brazil (Fig. 5).

**Remarks.**—The holotype has the right leg III missing the tarsus, right leg IV and left leg II.

*Enna rothi* new species  
Figs. 5, 46–56

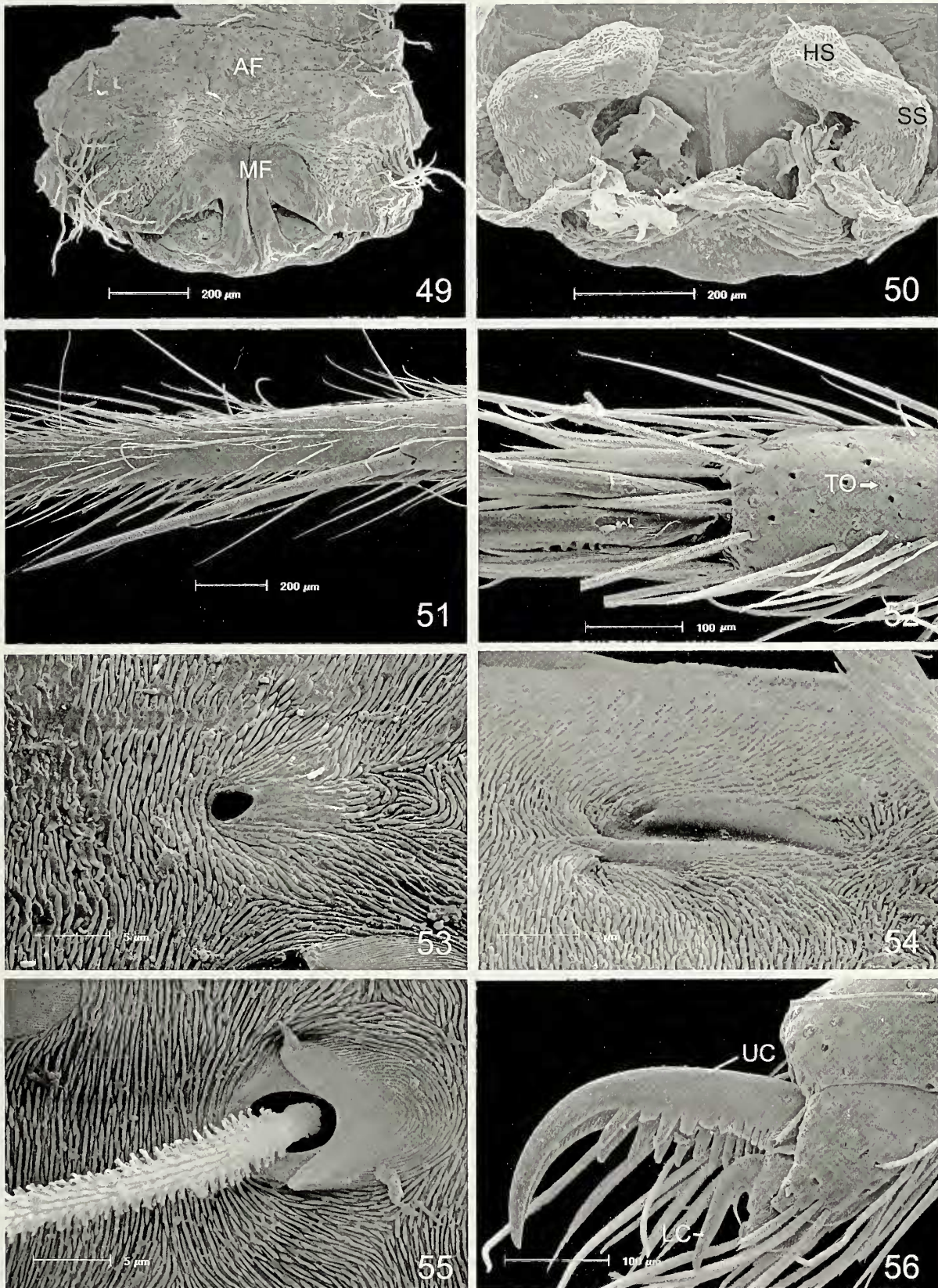
**Type material.**—Holotype female: ECUADOR: *Quijos*: Napo, 12 km from Baeza, 00°27'S, 77°53'W, 10 September 1994, V. Roth (CAS).

**Etymology.**—The specific name is a patronym in honor of the collector of the type, V.D. Roth.

**Diagnosis.**—The female of *E. rothi* is similar to those of *E. hara* (Fig. 76) and *E. baeza* (Fig. 79) by the shape of the projection of the middle field of the epigynum (Figs. 48, 49), but can be separated from them by the shape of the head of the spermathecae (Figs. 47, 50).

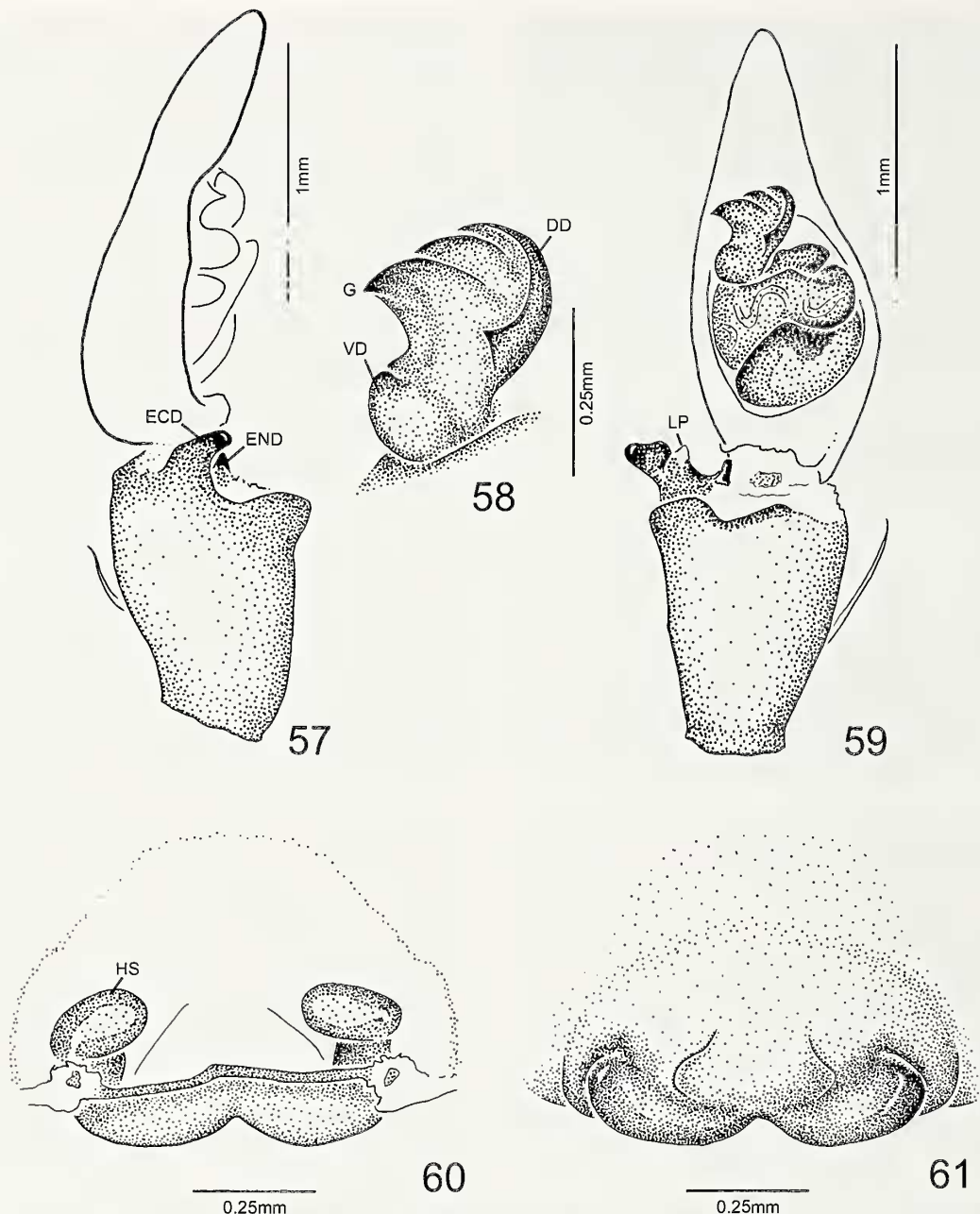
**Description.**—*Female (holotype)*: Carapace 4.78 long, 4.25 wide, low dark brown, darker laterally. Clypeus light brown, darker laterally, 0.21 high. Anterior eye row slightly straight, 1.12 wide; posterior 1.86. AME 0.24, ALE 0.20, PME 0.28, PLE 0.30; AME–AME 0.12, AME–ALE 0.14, PME–PME 0.40, PME–PLE 0.50, MOQ, 0.49 long, dorsal view, frontal view 0.65, anterior width 0.62, posterior width 0.99. Chelicerae reddish brown with yellowish setae, darker laterally; promargin and retromargin with three teeth equidistant and subequal in size. Sternum yellowish with sparse light setae, 2.07 long, 2.01 wide. Labium dark brown, yellowish laterally; 0.71 long, 0.80 wide. Legs light brown, femora with sparse brownish spots dorsally, relative length: IV-I-II-III, I – femur 7.04/ tibia-patella 9.71/ metatarsus 6.78/ tarsus 2.66/ total 26.19; II – 6.51/ 9.44/ 5.71/ 2.79/ 24.45; III – 5.32/ 5.71/ 5.45/ 1.59/ 18.07; IV – 6.65/ 8.11/ 6.91/ 2.92/ 24.59. Base of macrosetae prominent (Fig. 51). Tarsal organ conspicuous on dorsal surface of leg IV (Figs. 52, 53). Bothrium with prominent hood (Fig. 55). Tarsal claw pectinated, with eleven distinct teeth on upper claw and one short, slender tooth on lower claw (Fig. 56). Slit sense organ on lateral side of right leg II conspicuous (Fig. 54). Abdomen small, dorsum light brown with two





Figs. 49–56.—Morphological details of *Enna rothi*. 49, 50. Epigynum: 49. Ventral view; 50. Dorsal view. 51. Ventral macrosetae of tibia I. 52. Tarsal organ of leg IV, general view. 53. Tarsal organ of leg IV. 54. Slit sense organ of right leg II. 55. bothrium of leg IV. 56. Tarsal claw of leg IV. Abbreviations: AF, anterior field of epigynum; HS, head of spermathecae; LC, lower claw; MF, middle field of epigynum; SS, stalk of spermathecae; TO, tarsal organ; UC, upper claw.





Figs. 57–61.—*Enna colonche*. 57–59. Right male palpus: 57. Retrolateral view; 58. Detail of median apophysis; 59. Ventral view. 60, 61. Epigynum: 60. Dorsal view; 61. Ventral view. Abbreviations: DD, dorsal division of median apophysis; G, guide; HS, head of spermathecae; LP, lateral projection of RTA; ECD, ectal division of RTA; END, ental division of RTA; VD, ventral division of median apophysis.

paramedian brown bands, setaceous, grayish ventrally. Middle field of epigynum with two deep grooves; posterior margin elevated (Figs. 46, 48, 49). Head of spermathecae rounded and small (Figs. 47, 50).

**Distribution.**—Known only from the type locality in Ecuador (Fig. 5).

**Remarks.**—The holotype has the left leg IV missing.

*Enna colonche* new species  
Figs. 5, 57–61

**Type material.**—Holotype male: ECUADOR: Colonche River, 02°01'S, 80°40'W (CAS). Paratypes: 2 females, same data as holotype (CAS).

**Etymology.**—The specific name is a noun in apposition taken from the type locality.

**Diagnosis.**—The male of *E. colonche* (Figs. 57–59) resembles those of *E. estebanensis* males (Fig. 67) by the presence of a lateral acute projection on the dorsal division of the median apophysis and a reduced ventral division of the median apophysis, but differs by the less curved guide (Figs. 58, 59) and by the ectal division of the tibial apophysis, which is curved and ventrally pointed (Fig. 57). The female bears a rounded median excavation on the posterior margin of the epigynum (Fig. 61).

**Description.**—*Male (holotype)*: Carapace 3.60 long, 3.00 wide, dark brown; blanché due to drying. Clypeus blanché

due to drying, 0.35 high. Anterior eye row straight to slightly procurved, 0.90 wide; posterior 1.70 wide. AME 0.23, ALE 0.16, PME 0.28, PLE 0.28; AME–AME 0.16, AME–PLE 0.03, PME–PME 0.52, PME–PLE 0.30, MOQ, 0.62 long, dorsal view, frontal view 0.68, anterior width 0.56, posterior width 0.96. Chelicerae reddish brown, lighter distally, lateral carina present; promargin with three teeth, equidistant, middle largest and retromargin of fang furrow with three teeth, proximal two, closer together. Sternum blanched due to drying; 1.45 long, 1.50 wide. Labium pale brown, lighter on anterior margin; 0.63 long, 0.61 wide. Legs blanched due to drying, relative length: I–IV–II–III, I – femur 3.70/ tibia-patella 5.50/ metatarsus 4.00/ tarsus 1.90/ total 15.10; II – 3.80/ 5.30/ 3.60/ 1.70/ 14.40; III – 3.20/ 3.80/ 2.80/ 1.30/ 11.10; IV – 3.80/ 4.60/ 4.30/ 1.80/ 14.50. Abdomen blanched due to drying, with scattered setae. Palpus with dorsal division with two distal grooves (Figs. 58, 59). Ectal division of RTA with lateral projection (LP) triangular and ental division slender and acuminate (Fig. 57).

*Female (paratype)*: Carapace as in male, 2.70 long, 2.70 wide. Clypeus as in male, 0.25 high. Anterior eye row straight to slightly procurved, 0.82 wide; posterior 1.52 wide. AME 0.20, ALE 0.13, PME 0.22, PLE 0.22; AME–AME 0.12, AME–ALE 0.05, PME–PME 0.48, PME–PLE 0.26, MOQ, 0.52 long, dorsal view, anterior width 0.49, posterior width 0.90. Chelicerae reddish brown, lighter distally; promargin and retromargin with three teeth. Sternum as in male; 1.35 long, 1.45 wide. Labium as in male; 0.63 long, 0.55 wide. Legs blanched due to drying, relative length: IV–II–I–III, I – femur 2.90/ tibia-patella 3.90/ metatarsus 2.40/ tarsus 1.20/ total 10.40; II – 3.10/ 3.80/ 2.60/ 1.20/ 0.70; III – 2.70/ 3.00/ 2.20/ 1.10/ 9.00; IV – 3.20/ 3.80/ 3.50/ 1.40/ 11.90. Ventral pairs of macrosetae on tibiae: I-4; II-4; III-3; IV-4. Abdomen as in male, with scattered setae. Epigynum with short, elliptical spermathecae, largely separated from each other (Fig. 60).

**Distribution.**—This species is known only from the type locality in Ecuador (Fig. 5).

**Remarks.**—The holotype was apparently dried resulting in blanching of the color pattern along with shriveling of the abdomen and some distortion of the legs and carapace.

*Enna estebanensis* (Simon 1898)

Figs. 5, 62–70

*Hesydrus estebanensis* Simon 1898:20; Roewer 1954:137

*Enna estebanensis* (Simon): Carico 2005a: 786; Platnick 2007.

**Type material.**—Lectotype (present designation) male: VENEZUELA: San Esteban (MNHN 17925). Paralectotypes: 2 males, 3 females, same data as lectotype (MNHN).

**Diagnosis.**—The male palpus of *E. estebanensis* (Figs. 65–67) is similar to that of *E. colonche* (Figs. 57–59) by the general shape of the median apophysis and the reduced ventral division of the median apophysis (Fig. 66), but can be differentiated by a small protuberance on the dorsum of the ectal division of the retrolateral tibial apophysis (Fig. 67), and the female epigynum which bears a small median groove on the posterior margin of the epigynum (Fig. 70).

**Description.**—*Male (lectotype)*: Carapace (Figs. 62, 63) 3.48 long, 2.85 wide, light brown, moderately high. Clypeus dark brown, 0.31 high. Anterior eye row straight (Fig. 64), 0.86 wide; posterior 1.61 wide. AME 0.15, ALE 0.10, PME

0.21, PLE 0.12; AME–AME 0.15, AME–ALE 0.06, PME–PME 0.46, PME–PLE 0.34, MOQ, 0.41 long, dorsal view, frontal view 0.49, anterior width 0.37, posterior width 0.89. Chelicerae orange, with light setae, projected anteriorly (Fig. 63), and with distal depressions on anterior surface (Fig. 64); lateral carina prominent (Fig. 63); promargin and retromargin of fang furrow with three subequal and equidistant teeth. Sternum yellowish, with small brownish setae; 1.39 long, 1.42 wide. Labium yellowish, lighter on anterior margin; 0.31 long, 0.46 wide. Legs yellowish, relative length: I–IV–II–III, I – femur 3.76/ tibia-patella 5.06/ metatarsus 3.81/ tarsus 1.99/ total 14.62; II – 3.40/ 4.56/ 3.23/ 1.57/ 12.76; III – 2.49/ 3.48/ 2.90/ 1.24/ 10.11; IV – 3.81/ 4.23/ 4.15/ 1.66/ 13.85. Abdomen (Figs. 62, 63) elongated, setaceous, dorsum with sparse grayish spots, yellowish ventrally. Palpus with a reduced ventral division; dorsal division with a small pointed lateral lamella (Fig. 67). Ectal division prominent (Figs. 65, 66). Ental division of retrolateral tibial apophysis sclerotized and subtriangular (Fig. 66).

*Female (paralectotype)*: Carapace as in male, 2.94 long, 2.63 wide. Clypeus yellowish, 0.21 high. Anterior eye row slightly straight, 0.77 wide; posterior 1.42 wide. AME 0.15, ALE 0.10, PME 0.16, PLE 0.13; AME–AME 0.15, AME–ALE 0.07, PME–PME 0.43, PME–PLE 0.31, MOQ, 0.40 long, dorsal view, frontal view 0.43, anterior width 0.46, posterior width 0.83. Chelicerae as in male, without lateral carina; promargin and retromargin of fang furrow with three teeth. Sternum light brown, with brownish setae; 1.17 long, 1.48 wide. Labium dark brown, lighter on anterior margin; 0.49 long, 0.52 wide. Legs yellowish, relative length: IV–I–II–III, I – femur 2.82/ tibia-patella 4.31/ metatarsus 2.98/ tarsus 1.41/ total 11.52; II – 2.90/ 4.15/ 2.40/ 1.25/ 10.70; III – 2.57/ 2.82/ 2.15/ 1.07/ 8.61; IV – 3.32/ 3.90/ 3.56/ 1.32/ 12.10. Abdomen rounded, setaceous, coloration as in male. Epigynum with posterior margin excavated (Figs. 68, 70). Head of spermathecae elliptical and copulatory openings conspicuous in dorsal view (Fig. 69).

**Distribution.**—This species is known only from the type locality in Venezuela (Fig. 5).

**Remarks.**—A male has been selected as the lectotype and a female as paralectotype since in Simon's first description of this species a holotype was designated.

*Enna huanuco* new species

Figs. 5, 71–73

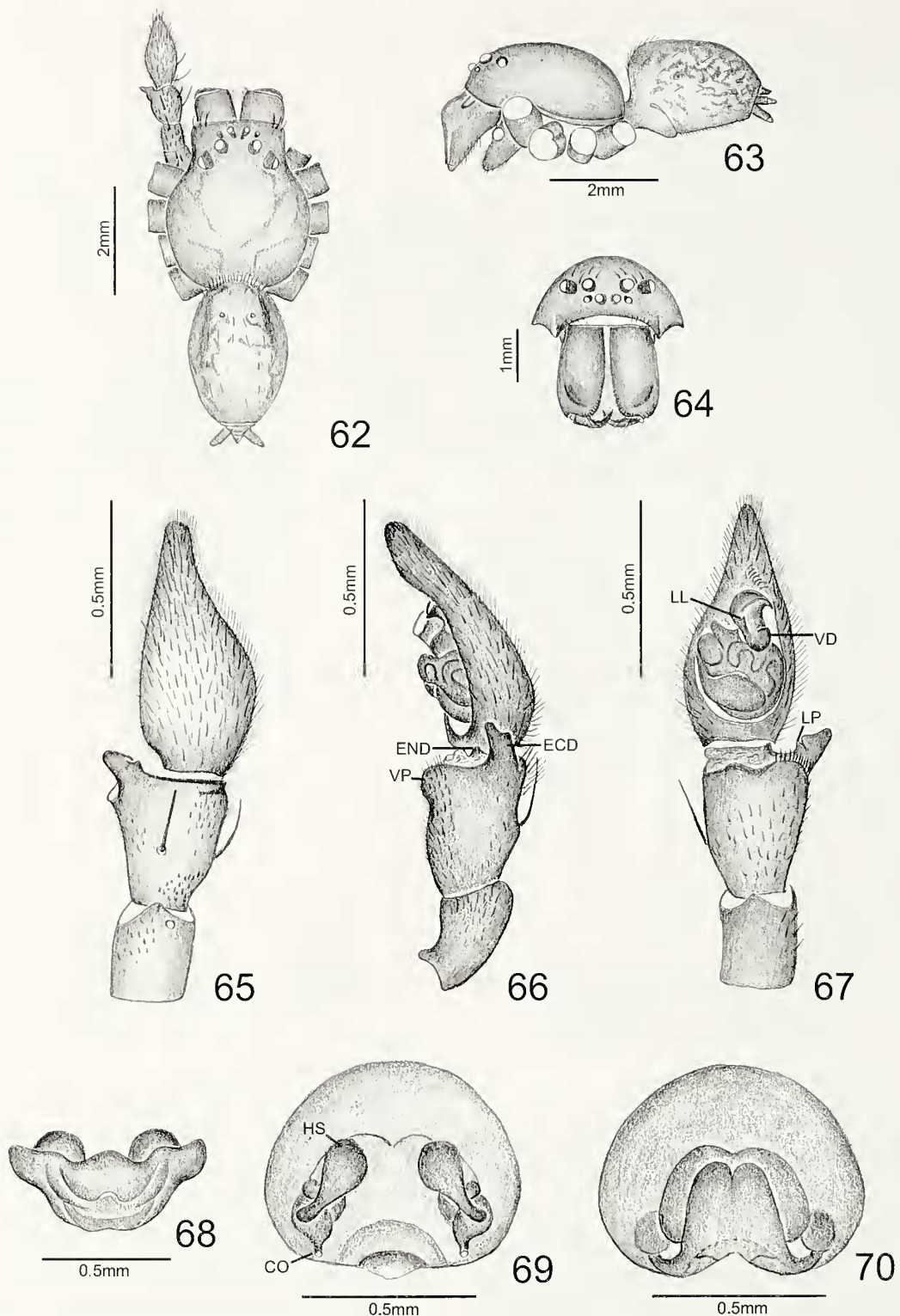
**Type material.**—Holotype male: PERU: *Huanuco*: Divisoria, 09°30'S, 75°50'W, 23 September 1946 (AMNH).

**Etymology.**—The specific name is a noun in apposition taken from the type locality.

**Diagnosis.**—The male of *E. huanuco* is similar to that of *E. braslandia* by the general shape of the median apophysis and the retrolateral tibial apophysis (Fig. 35), but can be distinguished by the smaller and rounded guide of the median apophysis (Figs. 71–73).

**Description.**—*Male (holotype)*: Carapace 4.39 long, 3.73 wide, moderately low, dark brown with lateral brownish bands. Clypeus light brown, 0.25 high, Anterior eye row slightly straight, 1.02 wide; posterior 2.01 wide. AME 0.23, ALE 0.12, PME 0.24, PLE 0.25; AME–AME 0.46, AME–ALE 0.16, PME–PME 0.58, PME–PLE 0.44, MOQ, 0.52 long,

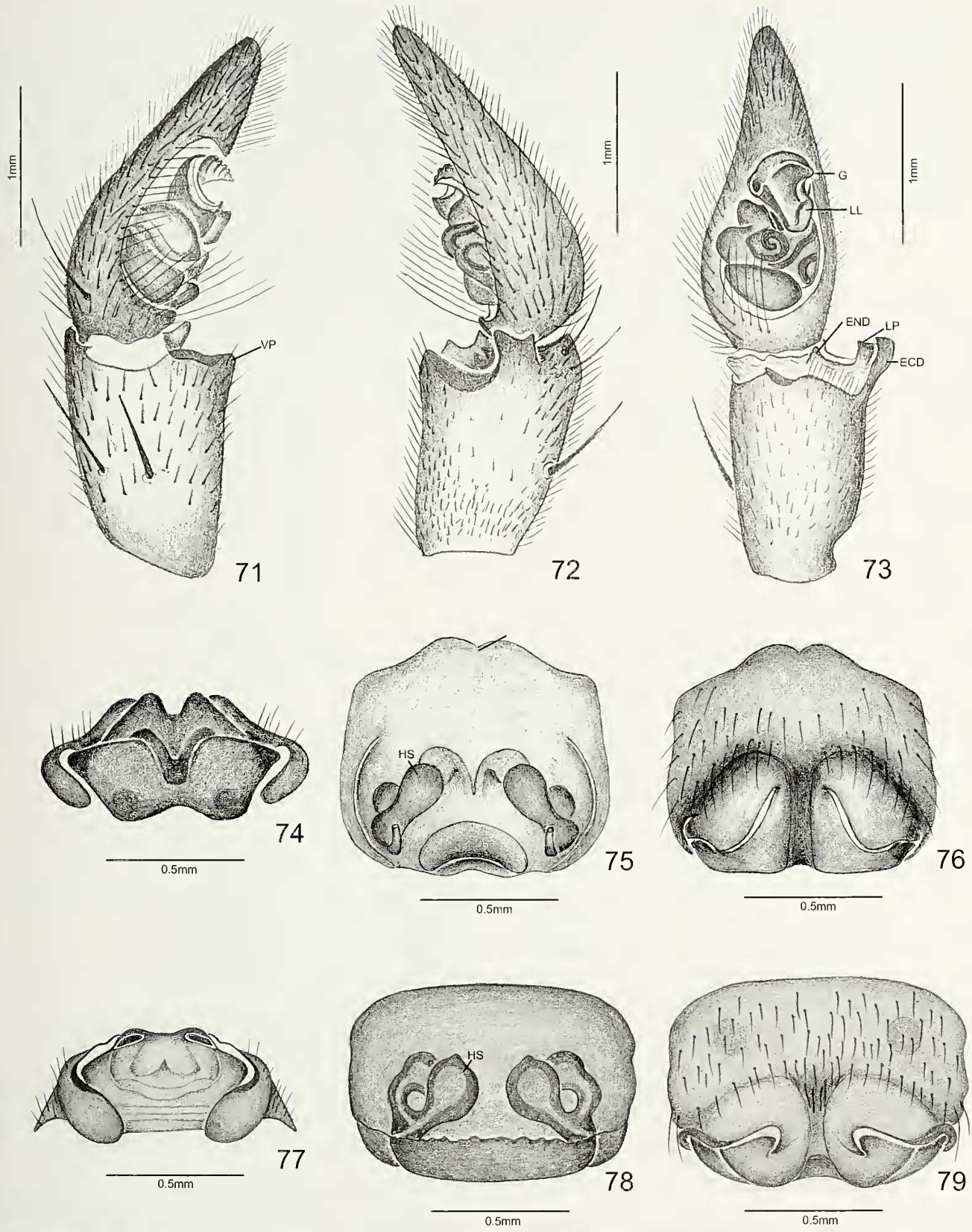




Figs. 62–70.—*Emma estebanensis*. 62–64. Male: 62. Dorsal view; 63. Lateral view; 64. Frontal view. 65–67. Left male palpus: 65. Dorsal view; 66. Retrolateral view; 67. Ventral view. 68–70. Epigynum: 68. Posterior view; 69. Dorsal view; 70. Ventral view. Abbreviations: CO, copulatory ducts; HS, head of spermathecae; LL, lateral lamella; LP, lateral projection of RTA; ECD, ectal division of RTA; END, ental division of RTA; VD, ventral division of median apophysis; VP, ventral protuberance of male palpal tibia.

dorsal view, frontal view 0.65, anterior width 0.64, posterior width 1.05. Chelicerae dark brown with small light brown setae, slightly enlarged at base; promargin and retromargin of fang furrow with equal and equidistant teeth. Sternum

brownish, with dark setae: 1.51 long, 1.55 wide. Labium brownish, lighter on anterior margin: 0.46 long, 0.71 wide. Legs light brown, relative length: IV-I-II-III, I – femur 4.81/ tibia-patella 6.97/ metatarsus 4.64/ tarsus 2.07/ total 18.49; II –



Figs. 71-79.—*Enna* spp. 71-73. *E. luanuco*, left male palpus: 71. Prolateral view; 72. Retrolateral view; 73. Ventral view. 74-76. *E. hura*, epigynum: 74. Posterior view; 75. Dorsal view; 76. Ventral view. 77-79. *E. baeza*, epigynum: 77. Posterior view; 78. Dorsal view; 79. Ventral view. Abbreviations: G, guide; HS, head of spermathecae; LL, lateral lamella; LP, lateral projection of RTA; ECD, ectal division of RTA; END, ental division of RTA; VP, ventral protuberance of male palpal tibia.



4.89/ 6.31/ 4.31/ 1.82/ 17.33; III – 4.15/ 4.88/ 3.41/ 1.49/ 13.93; IV – 4.73/ 5.72/ 4.87/ 1.99/ 17.31. Abdomen oval, grayish, setaceous, dorsum with light brown spots anteriorly, light brown ventrally. Dorsal division of median apophysis with small grooves (Fig. 73). Median apophysis without basal tooth (Fig. 73). Ectal division of retrolateral tibial apophysis acuminate (Fig. 72). Ventral protuberance of male palpal tibia prominent (Fig. 71).

**Distribution.**—This species is known only from the type locality in Peru (Fig. 5).

*Enna hara* new species

Figs. 5, 74–76

**Type material.**—Holotype female: PERU: *San Martin*: Hara, 07°00'S, 76°50'W, 1–30 June 1947, F. Woytkowski (AMNH).

**Etymology.**—The specific name is a noun in apposition taken from the type locality.

**Diagnosis.**—The female of *E. hara* is similar to that of *E. baeza* by the general shape of the middle field of the epigynum (Fig. 79), but can be distinguished by the rounded shape of the head of the spermathecae (Fig. 75).

**Description.**—*Female (holotype)*: Carapace 5.47 long, 4.81 wide, moderately low, dorsum light brown with three light brown paramedian bands near cephalic area. Clypeus, orange, 0.37 high. Anterior eye row straight, 1.27 wide; posterior 2.35 wide. AME 0.24, ALE 0.18, PME 0.31, PLE 0.15; AME–AME 0.22, AME–ALE 0.09, PME–PME 0.21, PME–PLE 0.25, MOQ, 0.69 long, dorsal view, frontal view 0.71, anterior width 0.71, posterior width 1.17. Chelicerae dark brown with small light brown setae; promargin and retromargin of fang furrow with three subequal and equidistant teeth. Sternum brownish, with small brownish setae; 2.01 long, 2.23 wide. Labium light brown, darker on anterior margin; 1.02 long, 0.93 wide. Legs light brown, relative length: I–IV–II–III, I – femur 5.47/ tibia-patella 8.63/ metatarsus 5.56/ tarsus 2.65/ total 22.31; II – 4.73/ 6.88/ 5.39/ 2.57/ 19.57; III – 4.39/ 5.97/ 4.48/ 2.07/ 16.91; IV – 5.39/ 7.05/ 6.60/ 2.73/ 21.77. Abdomen oval, grayish, setaceous, dorsum with light brown spots on anterior region, yellowish ventrally. Epigynum with middle field bearing two lateral sulci (Fig. 76). Posterior margin of epigynum smooth (Figs. 74, 76). Spermathecae small (Fig. 75); head of spermathecae rounded and elongated (Fig. 75).

**Distribution.**—This species is known only from the type locality in Peru (Fig. 5).

**Remarks.**—The holotype has right legs I and III missing, and right leg IV detached.

*Enna baeza* new species

Figs. 5, 77–79

**Type material.**—Holotype female: ECUADOR: *Quijos*: Napo, 12 km from Baeza, 00°27'S, 77°53'W, 10 September 1994, V. Roth (CAS).

**Etymology.**—The specific name is a noun in apposition taken from the type locality.

**Diagnosis.**—The female epigynum of *E. baeza* (Fig. 79) is similar to that of *E. rothi* (Figs. 48, 49) by the general shape and by the presence of a short projection on the head of the spermathecae (Fig. 47, 50, 78) but can be distinguished by the

shape of the middle field of the epigynum and by the median projection on the posterior margin (Fig. 79).

**Description.**—*Female (holotype)*: Carapace 4.52 long, 3.99 wide, low, light brown, darker laterally. Clypeus light brown, 0.23 high. Anterior eye row slightly straight, 1.13 wide; posterior 1.87. AME 0.19, ALE 0.18, PME 0.32, PLE 0.20; AME–AME 0.26, AME–ALE 0.12, PME–PME 0.44, PME–PLE 0.40, MOQ, 0.51 long, frontal view, anterior width 0.58, posterior width 1.01. Chelicerae reddish brown with yellowish setae, darker laterally; promargin and retromargin with three teeth equidistant and equal in size. Sternum yellowish with short light brown setae, 2.00 long, 2.21 wide. Labium dark brown, 0.66 long, 0.81 wide. Legs light brown, femora slightly darker dorsally, relative length: I–II–IV–III, I – femur 5.98/ tibia-patella 8.64/ metatarsus 5.71/ tarsus 2.26/ total 22.59; II – 6.11/ 8.24/ 5.32/ 2.39/ 22.06; III – 4.65/ 5.32/ 4.52/ 1.86/ 16.35; IV – 6.13/ 6.91/ 2.79/ 2.24/ 18.07. Abdomen short with a wide spot anteriorly, near to cardiac region and two paramedian white bands extending to posterior region; dorsum dark brown, setaceous, yellowish ventrally. Middle field of epigynum with a pair of median deep grooves (Fig. 77); posterior margin moderately elevated and with two lateral projections (Fig. 79). Head of the spermathecae rounded, short and with short pointed projections (Fig. 78).

**Distribution.**—This species is known only from the type locality in Ecuador (Fig. 5).

*Enna caliensis* new species

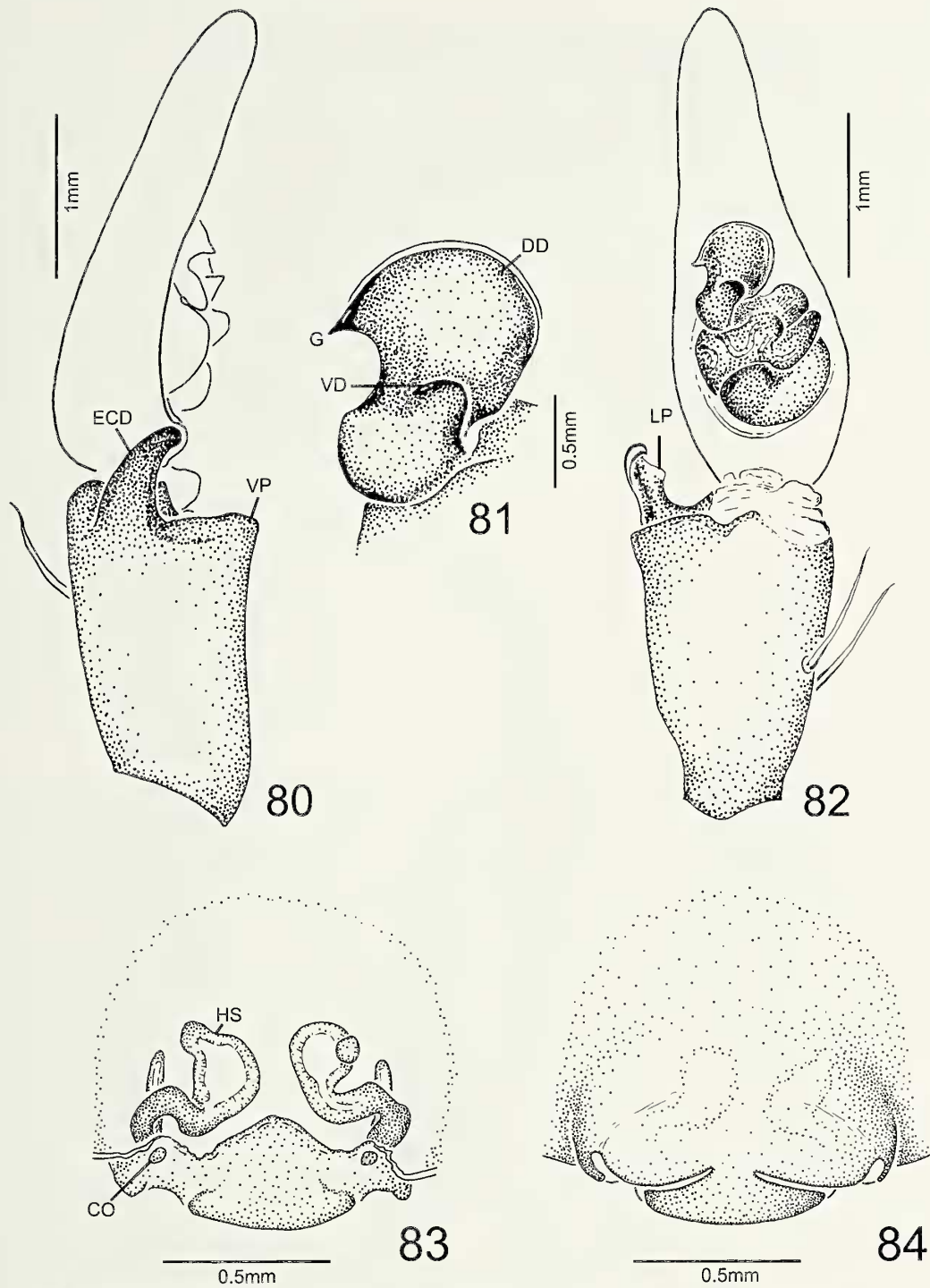
Figs. 5, 80–84

**Type material.**—Holotype male: COLOMBIA: *Cali*: Valle, 03°26'N, 76°31'W, 5 March 1973, H. Levi (MCZ 63818). Paratype: 1 female, same data as holotype (MCZ 70112).

**Etymology.**—The specific name refers to the type locality.

**Diagnosis.**—The male palpus of *E. caliensis* (Figs. 80–82) is similar to that of *E. lmarinilla* (Figs. 90–93) by the shape of the lateral projection of the ectal division of the retrolateral tibial apophysis, but can be distinguished by the presence of a reduced, laterally projected ventral division of the median apophysis (Figs. 81, 82). The female epigynum bears a median scape-like projection on the posterior margin (Fig. 84), and the head of the spermathecae has a small, rounded lateral projection (Fig. 83).

**Description.**—*Male (holotype)*: Carapace 7.00 long, 5.70 wide, lighter distally, darker on anterior region of cephalic area, scattered long setae. Clypeus, dark brown, 0.62 high. Anterior eye row straight, 1.46 wide; posterior 2.65. AME 0.38, ALE 0.25, PME 0.33, PLE 0.40; AME–AME 0.24, AME–ALE 0.11, PME–PME 0.67, PME–PLE 0.55, MOQ, 0.77 long, frontal view, anterior width 0.80, posterior width 1.40. Chelicerae reddish brown, with distinct basal lateral carina, flattened area distally and frontally; promargin with three teeth, middle largest and retromarginal with three teeth on fang furrow, equidistant and equal in size, distal two close to each other, small tooth proximal to other three and near base of third tooth. Sternum yellowish, darker on margins; 3.12 long, 3.04 wide. Labium dark brown, lighter at anterior margin, darker laterally; 1.60 long, 1.28 wide. Legs light brown, covered by dense setae, relative length: I–II–IV–III, I – femur 8.00/ tibia-patella 11.60/ metatarsus 8.30/ tarsus 4.65/ total 31.40; II – 8.00/ 11.00/ 7.70/ 3.19/ 29.90; III – 6.80/ 8.12/



Figs. 80–84.—*Enna caliensis*. 80–82. Right male palpus: 80. Retrolateral view; 81. Detail of median apophysis; 82. Ventral view. 83, 84. Epigynum: 83. Dorsal view; 84. Ventral view. Abbreviations: CO, copulatory ducts; DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis (RTA); G, guide; HS, head of spermathecae; LP, lateral projection of RTA; VD, ventral division of median apophysis; VP, ventral protuberance of male palpal tibia.

6.21/ 2.79/ 23.90; IV – 7.70/ 9.70/ 8.20/ 3.30/ 28.90. Ventral pairs of macrosetae on tibiae: I-4; II-4; III-3; IV-4. Abdomen dorsum dark brown, light at cardiac area, pair of longitudinal light spots lateral to cardiac area, continued posteriorly with three pairs of light spots, venter light, integument folded, dense long setae, shorter ventrally. Palpus with dorsal division of median apophysis without distal grooves (Figs. 81, 82);

ectal division of RTA prominent and curved, rounded at apex (Fig. 80). Tegulum with small lateral groove (Fig. 82). Ventral protuberance of male palpal tibia prominent (Fig. 80).

**Female (paratype).**—Carapace 6.70 long, 5.70 wide, pale brown, darker on anterior part of cephalic area, scattered setae. Clypeus dark brown, 0.64 high. Anterior eye row straight, 1.50 wide; posterior 2.66 wide. AME 0.32, ALE 0.22,



PME 0.38, PLE 0.42; AME-AME 0.22, AME-ALE 0.12, PME-PME 0.66, PME-PLE 0.62, MOQ, 0.90 long, dorsal view, frontal view 0.87, anterior width 0.84, posterior width 1.36. Chelicerae dark reddish brown; promargin with three teeth, middle largest and retromargin of fang furrow with three teeth, equal in size, distal two closer to each other. Sternum, as in male; 3.00 long, 3.10 wide. Labium dark brown, light on anterior margin, darker laterally; 1.50 long, 1.25 wide. Legs brownish, covered with dense setae, relative length: IV-I-II-III, I - femur 7.10/ tibia-patella 9.80/ metatarsus 6.60/ tarsus 3.00/ total 26.50; II - 7.20/ 9.80/ 6.30/ 2.80/ 26.10; III - 6.20/ 7.71/ 5.31/ 2.30/ 21.70; IV - 7.20/ 8.90/ 7.50/ 3.10/ 26.70. Abdomen dorsum and sides dark brown, lighter ventrally, venter with dense long setae. Epigynum with conspicuous copulatory ducts (Fig. 83); posterior margin slightly projected (Fig. 84).

**Distribution.**—This species is known only from the type locality in Colombia (Fig. 5).

*Enna huarinilla* new species

Figs. 5, 85–96

**Type material.**—Holotype male: BOLIVIA: *La Paz*: near Coroico (Huarinilla river), 16°30'S, 68°09'W, elevation 3000 m, 31 July 1994, A.D. Brescovit (MCN 23799).

**Etymology.**—The specific name is a noun in apposition and refers to the type locality.

**Diagnosis.**—The palpus of *E. huarinilla* (Figs. 88–90) is similar to that of *E. caliensis* (Figs. 80–82) by the general shape of the retrolateral tibial apophysis (Figs. 89, 90, 94), but can be distinguished by the absence of the ventral division of the median apophysis and a shorter and less acute guide (Figs. 90–93).

**Description.**—*Male (holotype)*: Carapace (Fig. 86) 6.88 long, 5.89 wide, dark brown, with a median light brown stripe at cephalic area (Fig. 85). Clypeus, dark brown, 0.70 high. Anterior eye row slightly procurved (Fig. 87), 1.50 wide; posterior 2.63. AME 0.34, ALE 0.20, PME 0.40, PLE 0.41; AME-AME 0.20, AME-ALE 0.10, PME-PME 0.70, PME-PLE 0.60, MOQ, 0.78 long, frontal view, anterior width 0.82, posterior width 1.37. Chelicerae reddish brown, without lateral carina (Fig. 86); promargin with three teeth and retromargin with three teeth on fang furrow, equidistant and equal in size. Sternum light brown, small setae, darker on margins; 2.57 long, 2.91 wide. Labium dark brown, lighter on anterior margin; 1.24 long, 1.32 wide. Legs light brown, relative length: I-II-IV-III, I - femur 10.10/ tibia-patella 15.82/ metatarsus 11.71/ tarsus 4.67 / total 42.28; II - 9.71/ 14.63/ 10.11/ 3.19/ 37.64; III - 8.11/ 10.12/ 8.11/ 2.79/ 29.13; IV - 9.04/ 11.83/ 10.91/ 3.85/ 35.63. Ventral pairs of macrosetae on tibiae: I-4; II-4; III-3; IV-3. Tarsal claw with nine teeth on upper claw and one short, slender tooth on lower claw (Fig. 96). Abdomen setaceous, dorsum dark brown to grayish, three light brown small bands anteriorly (Fig. 85); venter light brown. Palpus with dorsal division of median apophysis concave (Figs. 90–93); ectal division of RTA long and rounded at apex (Figs. 89, 94). Lateral projection prominent and subtriangular (Figs. 88, 90, 95). Tegulum with small median protuberance (Figs. 91, 92). Ventral protuberance of male palpal tibia prominent (Fig. 89).

**Distribution.**—This species is known only from the type locality in Bolivia (Fig. 5).

*Enna igarape* new species

Figs. 5, 97–111

**Type material.**—Holotype male: BRAZIL: *Amazonas*: Igarapé da Lontra, Rio Urucú, Porto Urucú, Coari, 04°21'S, 49°32'W, 23 July 2003, D.D. Guimarães (MPEG 1435). Female allotype: same data as holotype (MPEG 1433). Paratypes: BRAZIL: *Amazonas*: 3 females, Estrada LUC 36, Rio Urucú, Porto Urucú, Coari, 23 July 2003, D.D. Guimarães (MPEG 1432); 1 female, same data as holotype (AMNH); 1 female, same data as holotype (MCZ 69736).

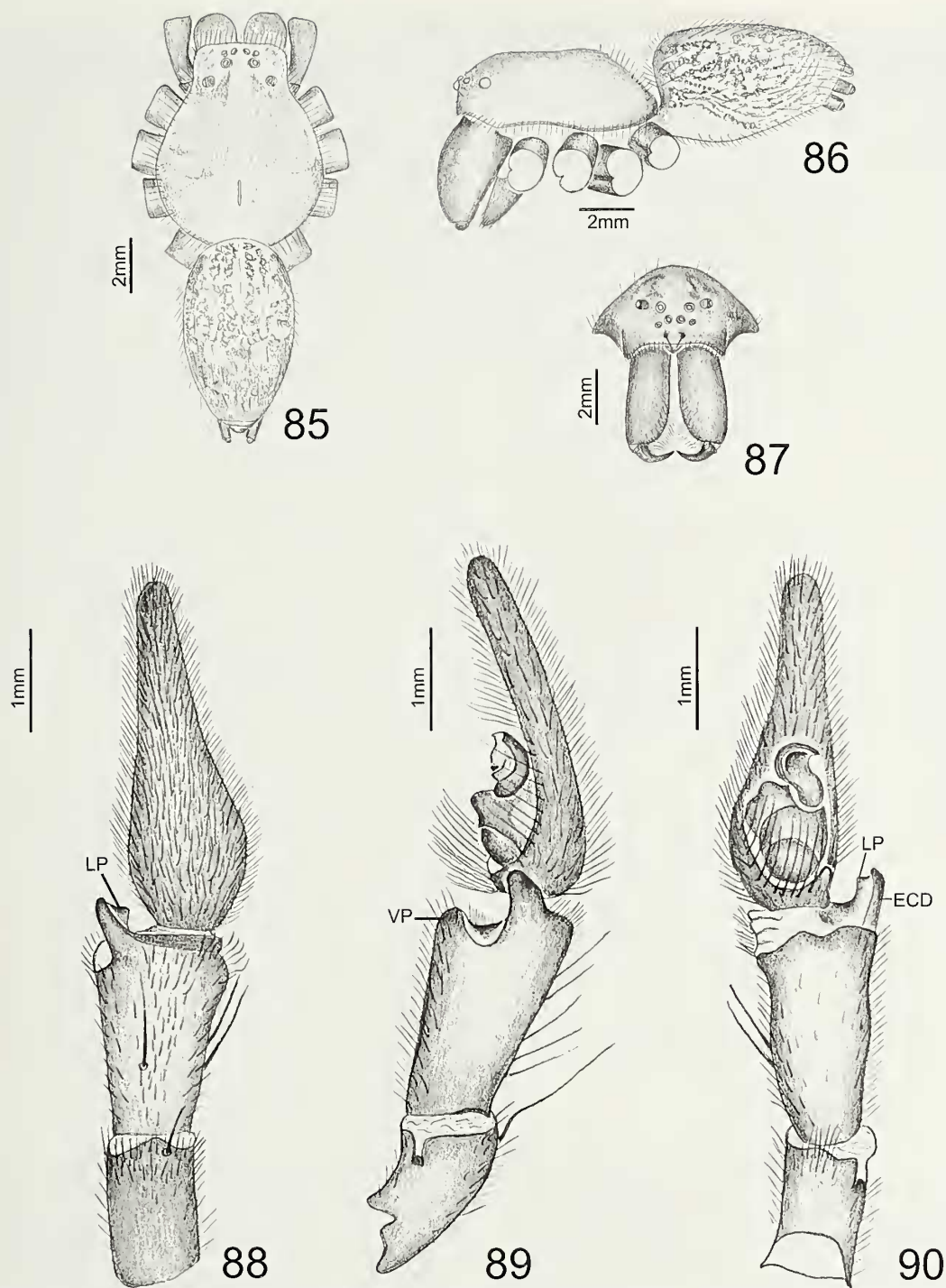
**Other material examined.**—BRAZIL: *Acre*: 1 ♀, Senador Guimard, Rio Iquiri, 10°10'S, 67°50'W, Expedição Departamento de Zoologia USP (MZSP 11730).

**Etymology.**—The specific name is a noun in apposition and refers to "igarapé," a Tupi-Guarani Indian name for narrow channel between two small portions of land.

**Diagnosis.**—The male palpus of *E. igarape* (Figs. 100, 101) is similar to that of *E. kuyuwiniensis* (Figs. 112–114) by the shape of the lateral projection on the retrolateral tibial apophysis, but can be distinguished from *E. bartica* (Figs. 116, 118) by the presence of only one basal tooth on the dorsal division of the median apophysis. The female epigynum bears a median excavation on the posterior margin (Figs. 102, 107) and small spermathecae, which are widely separated (Fig. 103).

**Description.**—*Male (holotype)*: Carapace (Figs. 97, 98) 2.57 long, 2.13 wide, pale brown with a paramedian yellowish band, light brown laterally. Clypeus, brownish, 0.18 high. Anterior eye row straight (Fig. 99), 0.65 wide; posterior 1.33 wide. AME 0.14, ALE 0.09, PME 0.24, PLE 0.15; AME-AME 0.09, AME-ALE 0.06, PME-PME 0.37, PME-PLE 0.21, MOQ, 0.37 long, dorsal view, frontal view 0.46, anterior width 0.43, posterior width 0.77. Chelicerae dark brown with small setae. Sternum yellowish with small light brown setae, 1.08 long, 1.17 wide. Labium dark brown, lighter on anterior margin; 0.48 long, 0.46 wide. Legs yellowish, relative length: I-IV-II-III, I - femur 3.07/ tibia-patella 4.56/ metatarsus 3.23/ tarsus 1.41/ total 12.27; II - 2.98/ 4.39/ 2.98/ 1.24/ 11.59; III - 2.40/ 2.98/ 2.41/ 0.91/ 8.70; IV - 2.98/ 3.73/ 3.75/ 1.23/ 11.69. Tarsal organ conspicuous (Figs. 108, 109). Bothrium prominent (Fig. 110). All tarsal claws pectinated, upper claw with nine teeth and lower claw with one long tooth (Fig. 111). Abdomen (Figs. 97, 98) rounded, setaceous, dorsum pale brown with sparse light spots, darker at laterals, yellowish ventrally. Palpus with ental division of retrolateral tibial apophysis absent (Figs. 100, 101, 106). Dorsal division of median apophysis concave (Figs. 101, 104); guide very short (Fig. 104). Subtegulum with two small projections at posterior margin (Figs. 101, 104).

*Female (paratype)*: Carapace as in male, 2.38 long, 2.07 wide. Clypeus light brown, 0.15 high. Anterior eye row straight, 0.68 wide; posterior 1.33. AME 0.15, ALE 0.07, PME 0.16, PLE 0.12; AME-AME 0.11, AME-ALE 0.06, PME-PME 0.40, PME-PLE 0.21, MOQ, dorsal view 0.36, frontal view 0.43, anterior width 0.43, posterior width 0.74. Chelicerae reddish brown, with brownish light setae. Sternum medium brown; 1.02 long, 1.08 wide. Labium dark brown; 0.40 long,



Figs. 85-90.—*Enna huarinilla*. 85-87. Male: 85. Dorsal view; 86. Lateral view; 87. Frontal view. 88-90. Left male palpus: 88. Dorsal view; 89. Retrolateral view; 90. Ventral view. Abbreviations: ECD, ectal division of retrolateral tibial apophysis (RTA); LP, lateral projection of RTA; VP, ventral protuberance of male palpal tibia.

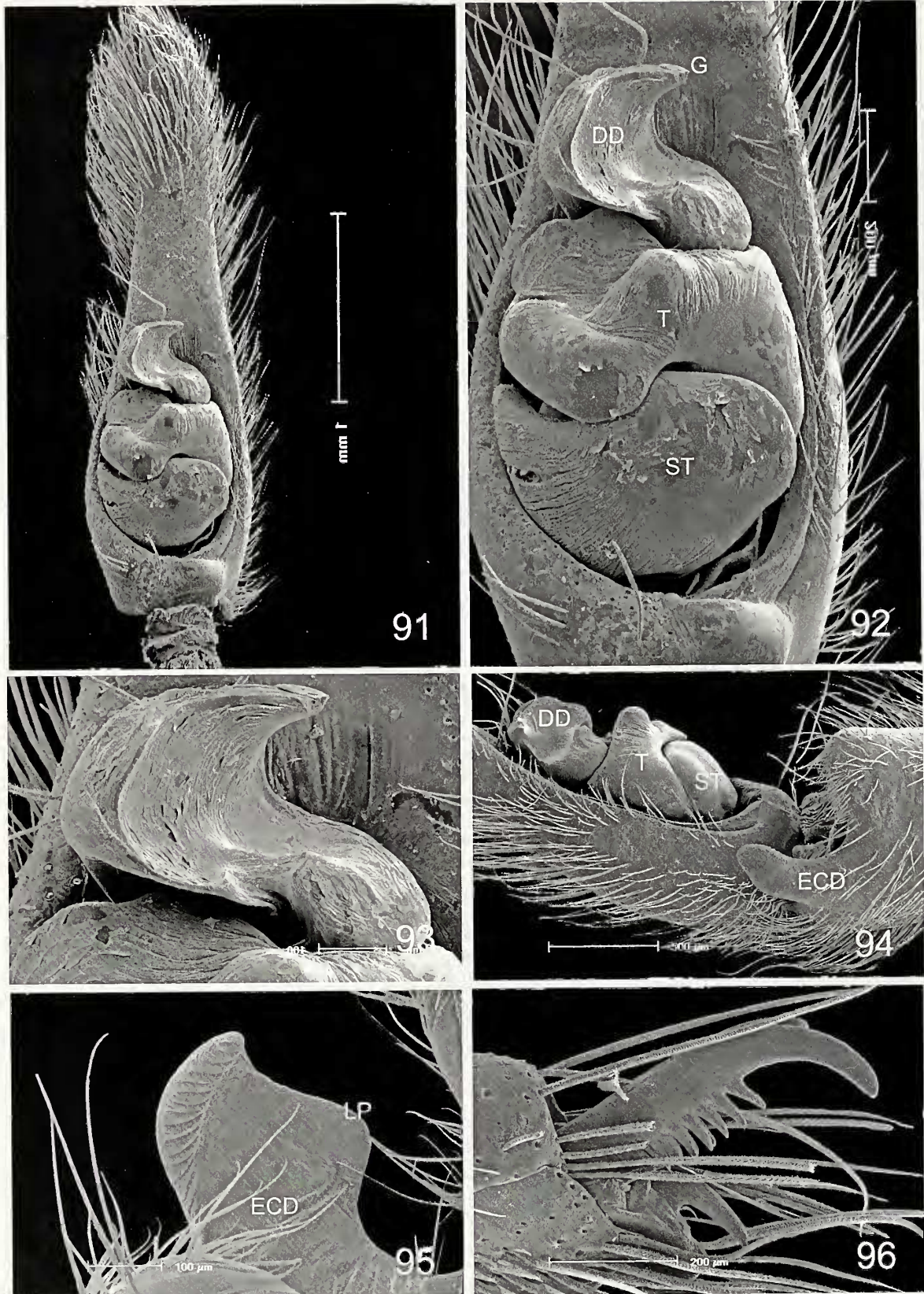
0.38 wide. Legs yellowish, dorsum of femora with sparse brownish spots, relative length: IV-I-II-III, I – femur 3.56/ tibia-patella 4.98/ metatarsus 3.41/ tarsus 0.99/ total 12.94; II – 3.65/ 4.31/ 2.57/ 1.16/ 11.69; III – 2.90/ 3.40/ 2.73/ 0.98/ 10.01; IV – 3.32/ 4.48/ 4.31/ 1.49/ 13.60. Abdomen coloration as in male. Epigynum small, posterior margin elevated and sclerotized with a median groove (Figs. 102, 107). Spermathecae short, with rounded head (Fig. 103).

**Distribution.**—This species is known from Brazil (Amazonas, Acre) (Fig. 5).

*Enna kuyuwiniensis* new species  
Figs. 5, 112-115

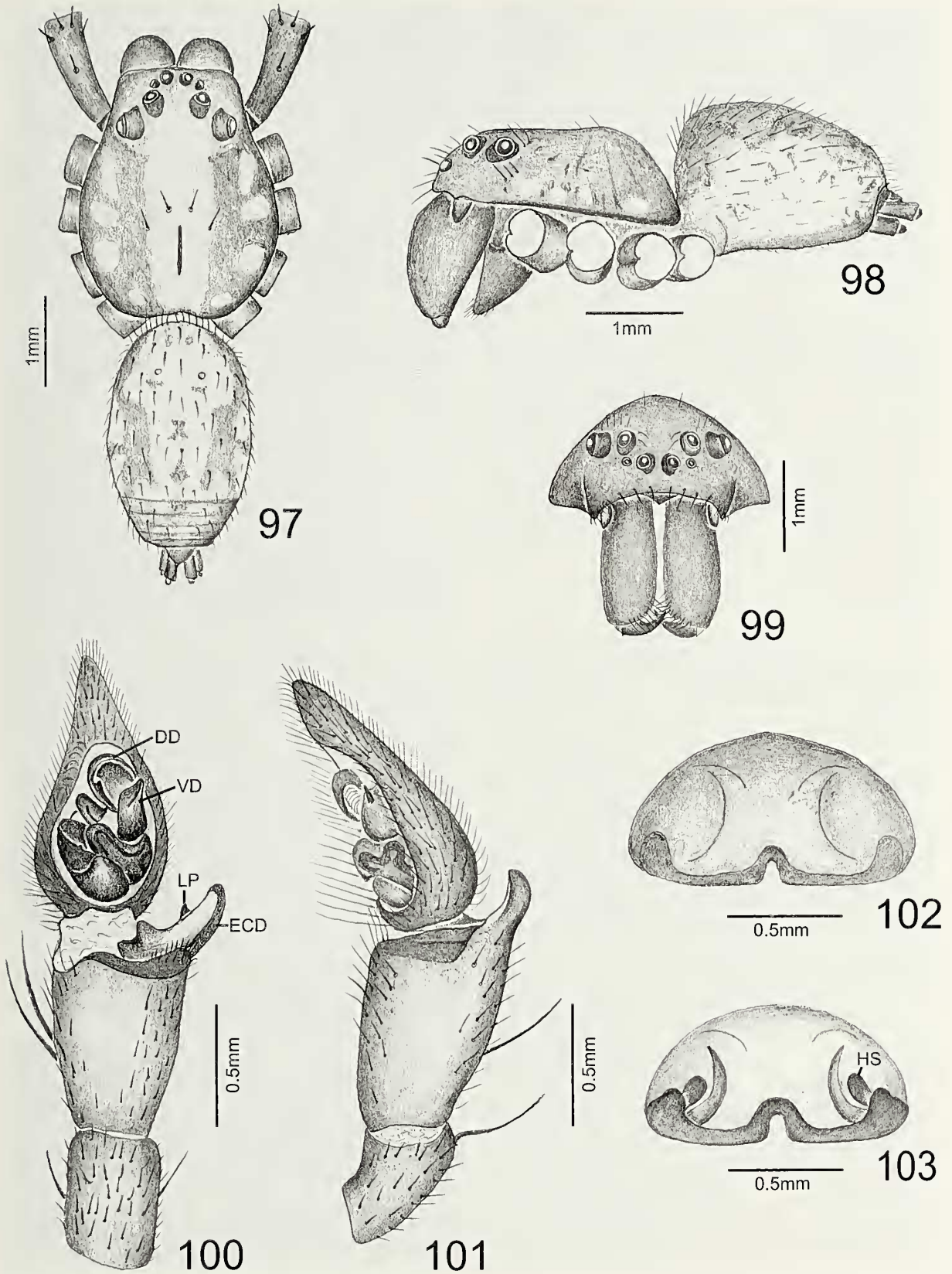
**Type material.**—Holotype male: GUYANA: *Kuyuwini*: River Kuyuwini, 02°13'N, 59°18'W, 20 November 1937, H.S. Hassler (AMNH).





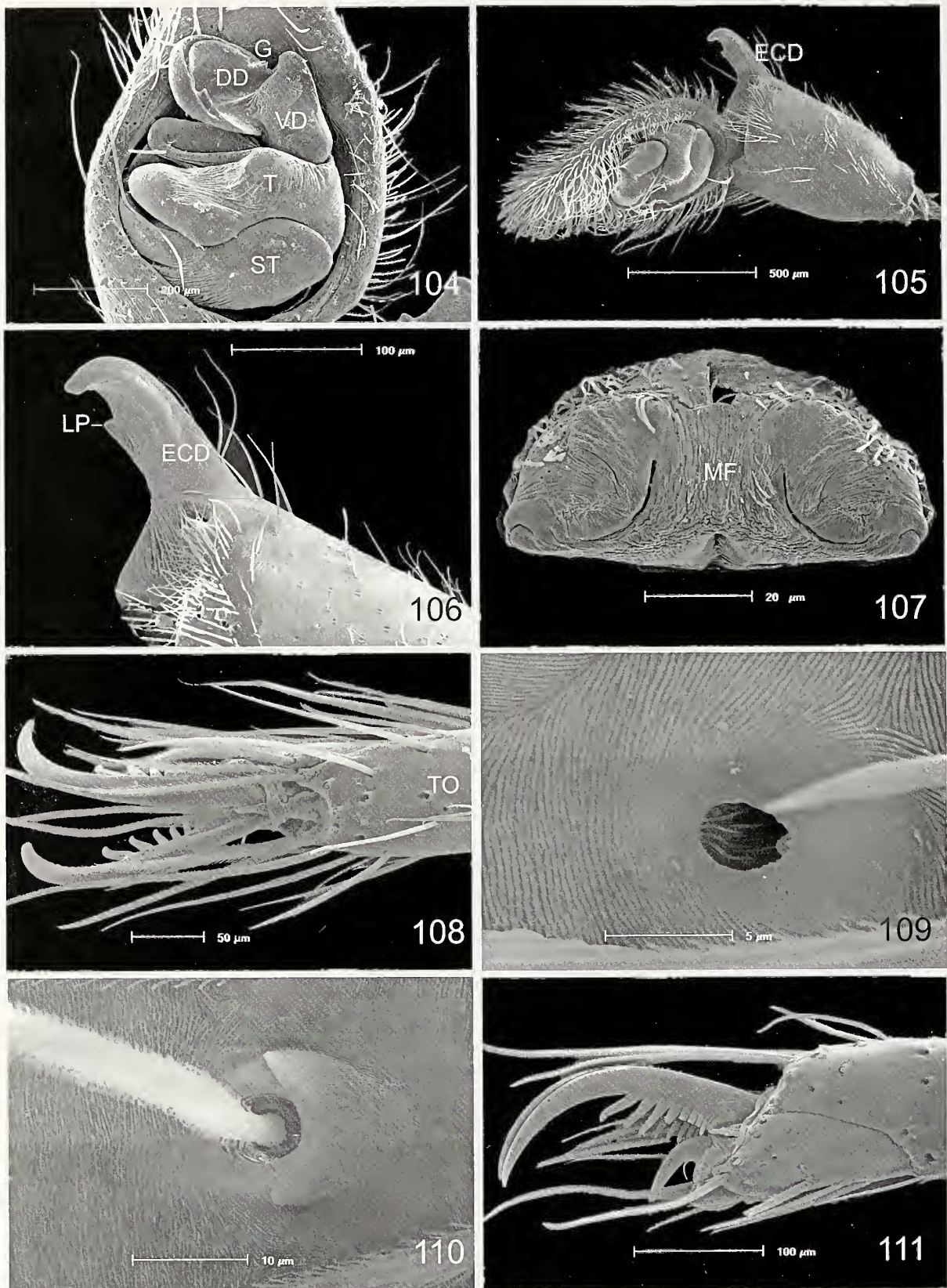
Figs. 91–96.—Morphological details of *Enna huarinilla*. 91–95. Left male palpus: 91. Ventral view; 92. Palpal bulb, ventral view; 93. Median apophysis, ventral view; 94. Retrolateral view; 95. Ectal division of retrolateral apophysis. 96. Tarsal claw of right leg IV. Abbreviations: DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis; G, guide; LP, lateral projection of retrolateral tibial apophysis; ST, subtegulum; T, tegulum.



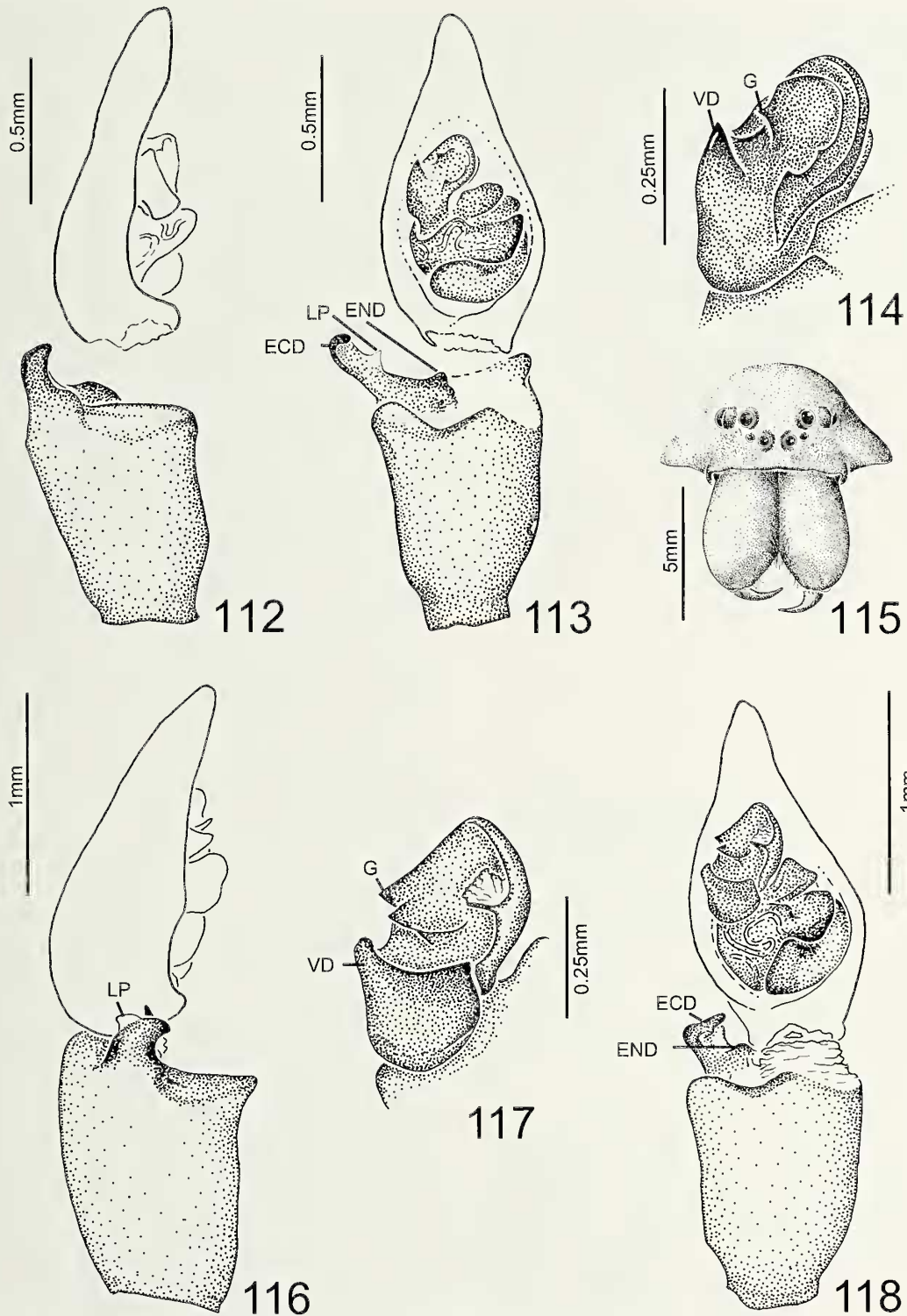


Figs. 97–103.—*Enna igarape*. 97–99. Male: 97. Dorsal view; 98. Lateral view; 99. Frontal view. 100, 101. Left male palpus: 100. Ventral view; 101. Retrolateral view. 102–103. Female epigynum: 102. Ventral view; 103. Dorsal view. Abbreviations: DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis (RTA); HS, head of spermathecae; LP, lateral projection of RTA; VD, ventral division of median apophysis.





Figs. 104–111.—Morphological details of *Emma igarape*. 104–106. Left male palpus: 104. Ventral view of bulb; 105. Retrolateral view; 106. Ectal division of retrolateral tibial apophysis. 107. Female epigynum, ventral view. 108. Tarsal claw of right leg IV, general view. 109. Detail of tarsal organ. 110. Bothrium of left leg II. 111. Tarsal claw of leg II. Abbreviations: DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis; G, guide; LP, lateral projection of retrolateral tibial apophysis; ST, subtegulum; T, tegulum.



Figs. 112–118.—*Enna* spp. 112–114. *E. kuyuwiniensis*, right male palpus: 112. Retrolateral view; 113. Ventral view; 114. Detail of median apophysis. 115. *E. kuyuwiniensis*, frontal view of carapace. 116–118. *E. bartica*, right male palpus: 116. Retrolateral view; 117. Detail of median apophysis; 118. Ventral view. Abbreviations: DD, dorsal division of median apophysis; G, guide; LP, lateral projection; ECD, ectal division of RTA; END, ental division of RTA; VD, ventral division of median apophysis.

**Etymology.**—The specific name refers to the type locality.

**Diagnosis.**—The male palpus of *E. kuyuwiniensis* (Figs. 12–14) resembles that of *E. igarape* (Figs. 100, 101, 104) by the shape of the lateral projection of the retrolateral tibial apophysis, but differs from the other males of *Enna* by the

presence of a prominent and acuminate ventral division of the median apophysis (Figs. 113, 114). The dorsal division of the median apophysis bears two lateral teeth (Figs. 113, 114).

**Description.**—*Male (holotype)*: Carapace 3.30 long, 2.60 wide, light brown, indistinct submarginal lighter bands, three



spots on each lateral margin, Clypeus dark brown, lighter on anterior margin, 0.30 high. Anterior eye row slightly recurved (Fig. 115), 0.84 wide; posterior 1.56 wide. AME 0.20, ALE 0.14, PME 0.26, PLE 0.28; AME-AME 0.12, AME-ALE 0.02, PME-PME 0.50, PME-PLE 0.26, MOQ, 0.37 long, dorsal view, anterior width 0.50, posterior width 0.97. Chelicerae, light reddish, scattered longitudinal dark spots. Sternum light brown, darker on margins, 1.40 long, 1.44 wide. Labium dark brown, lighter at anterior margin, darker laterally, 0.64 long, 0.50 wide. Legs light brown, I - missing, II - femur 3.80/ tibia-patella 5.00/ metatarsus 3.51, IV - femur 3.7. Ventral pairs of macrosetae on tibiae: II-4. Abdomen rounded, dorsum light with one pair of irregular dark spots laterally in anterior 2/3; posterior 1/3 with transverse alternating dark and light lines corresponding to folds in integument. Sides of abdomen with scattered smaller dark spots. Venter light brown, with scattered setae. Palpus with median apophysis prominent; guide short (Fig. 114). Retrolateral tibial apophysis with ectal division (ECD) prominent, elongated and acuminate, with curved tip (Figs. 112, 113); lateral projection of ECD is triangular (Fig. 113) and ental division (END) is short, sub-triangular (Fig. 113).

**Distribution.**—This species is known only from the type locality in Guyana (Fig. 5).

**Remarks.**—The holotype has the legs and palpus disarticulated, setae removed.

*Enna bartica* new species

Figs. 5, 116–118

**Type material.**—Holotype male, GUYANA: *Cnymini-Mazaruni*: Kartabo, Tropical Research Station, Bartica, 06°24'N, 58°37'W, New York Zoological Society (AMNH). Paratype: BRAZIL: *Amazonas*: 1 male, Uatumã River, 03°06'S, 60°48'W, 30 August 1985, G.A. Languth (MCN 23793).

**Etymology.**—The specific name is a noun in apposition and refers to the type locality.

**Diagnosis.**—The male palpus of *E. bartica* (Figs. 116–118) resembles that of *E. igarape* (Figs. 101, 104) by the shape of the ventral division of the median apophysis, but can be distinguished by the shape of the median apophysis which bears two lateral teeth (Figs. 117, 118).

**Description.**—*Male (holotype)*: Carapace 3.90 long, 3.40 wide, light brown, faint evidence of wide submarginal light band; pattern obscured due to age of specimen, with indistinct brown bands, dark brown laterally. Clypeus light brown, 0.36 high. Anterior eye row straight, 0.96 wide; posterior 1.80 wide. AME 0.25, ALE 0.16, PME 0.30, PLE 0.32; AME-AME 0.13, AME-ALE 0.03, PME-PME 0.53, PME-PLE 0.30, MOQ, 0.56 long, frontal view 0.64, anterior width 0.62, posterior width 1.04. Chelicerae reddish-brown, lighter distally. Sternum light, 1.72 long, 1.68 wide. Labium dark reddish-brown, lighter at anterior margin, 0.84 long, 0.72 wide. Legs light brown, obscure dark brown markings on dorsal surface of femora, III - femur 3.80/ tibia-patella 4.60/ metatarsus 3.60/ tarsus 1.50/ total 13.50; IV - 5.00/ 6.00/ 5.70. Abdomen dorsum light brown with scattered pairs of dark maculae; sides light with scattered dark maculae. Venter light brown. Palpus with dorsal and ventral divisions of median apophysis prominent (Figs. 117, 118); RTA prominent, ental division absent and ectal division coiled and rounded at apex

(Fig. 118). Ventral protuberance on male palpal tibia prominent (Fig. 116).

**Distribution.**—This species is known from Guyana (Kartabo) and Brazil (Amazonas) (Fig. 5).

*Enna bonaldoi* new species

Figs. 5, 119–146

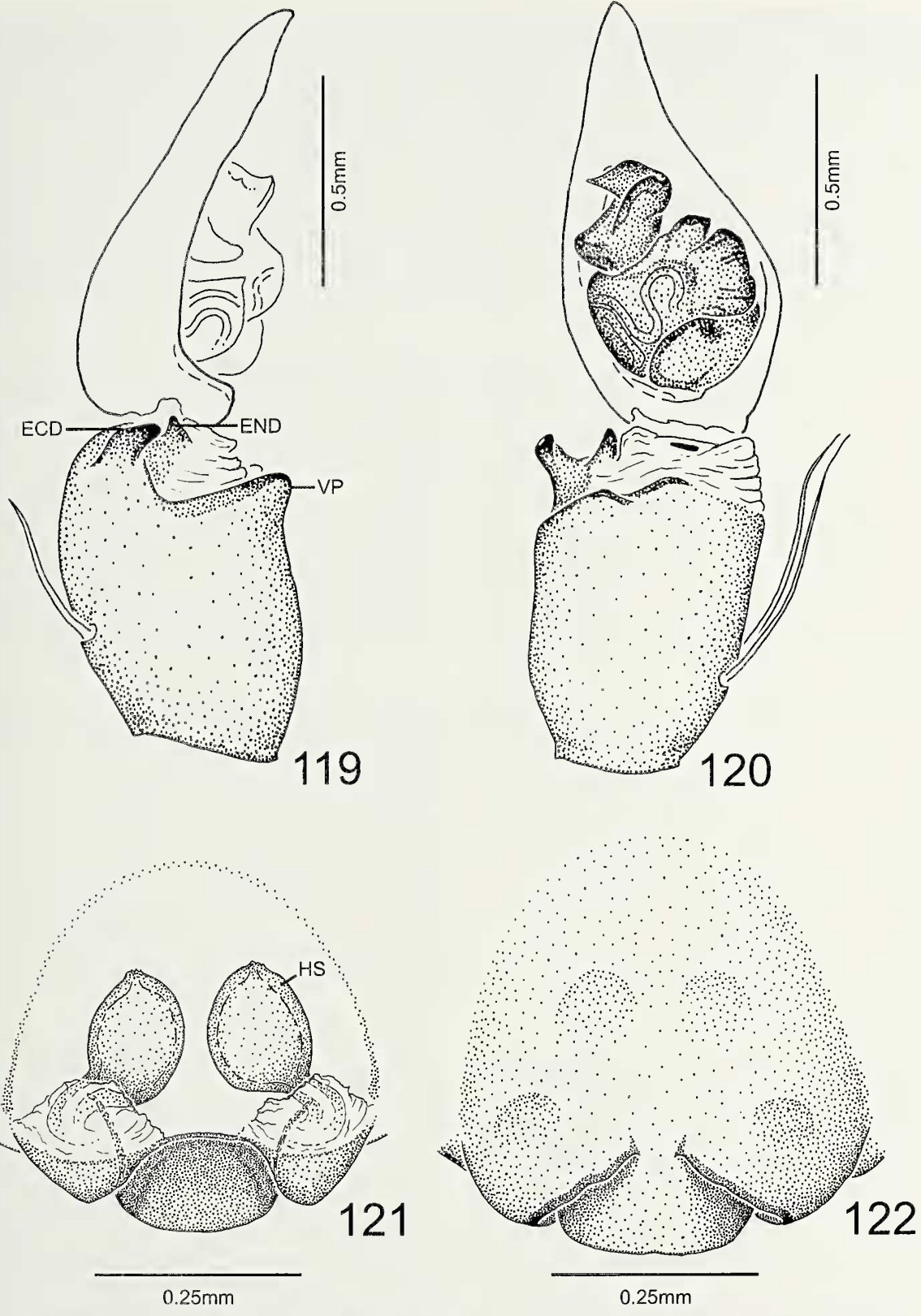
**Type material.**—Holotype male, BRAZIL: *Amazonas*: Igarapé da Tartaruga, Rio Urucú, Porto Urucú, Coari, 04°21'S, 49°32'W, 23 July 2003, A.B. Bonaldo (MPEG 2662). Paratype: BRAZIL: *Amazonas*: 1 female, Porto Urucú, rio Urucú, Igarapé da Lontra, Coari, 04°31'S, 49°38'W, 23.VII.2003, A.B. Bonaldo (MPEG 1427).

**Other material examined.**—BRAZIL: *Amazonas*: 2 ♀, Igarapé da Tartaruga, Porto Urucú, rio Urucú, Coari, 04°21'S, 49°32'W, 24 July 2003, D.D. Guimarães (MPEG 1429), A.B. Bonaldo; 1 ♂, 1 ♀, same data except A.B. Bonaldo (MPEG 1430); 3 ♂, 6 ♀, same data except 24 July 2003, D.D. Guimarães (MPEG 1425); 1 ♂, Igarapé da Lontra, 04°31'S, 49°38'W, 23 July 2003, A.B. Bonaldo (MPEG 1431); 6 ♂, 4 ♀, same data (MPEG 1426); 3 ♂, 2 ♀, same data except D.D. Guimarães (MPEG 1428); 3 ♂, 2 ♀ same data (MPEG 1427); 1 ♂, 1 ♀, same data (MCN 41060); 1 ♂, 1 ♀ (MCTP 19478); 1 ♂, 1 ♀, same data (IBSP 63148); 1 ♂, 1 ♀, same data (AMNH).

**Etymology.**—The specific name is a patronym in honor of the collector of the types, A.B. Bonaldo.

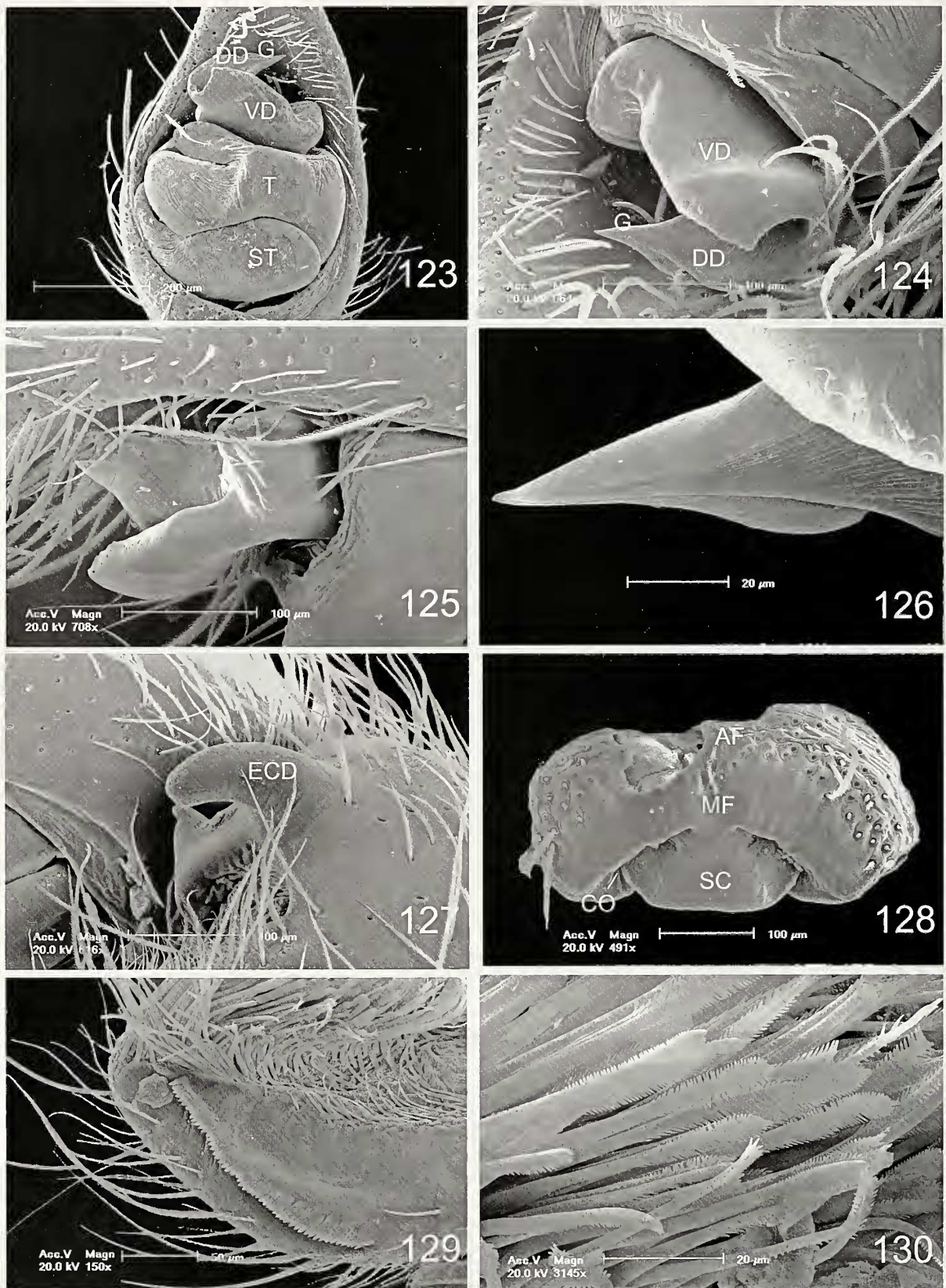
**Diagnosis.**—The male palpus of *E. bonaldoi* (Figs. 119–127) is similar to that of *E. riotopo* (Figs. 147, 148) by the general shape of the median apophysis, but can be distinguished by the shape of the guide (Fig. 120), which is acuminate and subtriangular and by the shape of the ental division of the retrolateral tibial apophysis (Figs. 119, 120). The middle field of the female epigynum is small and the heads of the spermathecae are small and rounded (Figs. 121, 122, 128).

**Description.**—*Male (holotype)*: Carapace 2.40 long, 2.00 wide, yellowish, no distinct pattern, covered with short, dark setae. Clypeus pale, no distinct pattern, 0.22 high. Anterior eye row straight (Fig. 133), 0.63 wide; posterior 1.15 wide. AME 0.15, ALE 0.11, PME 0.23, PLE 0.25; AME-AME 0.06, AME-ALE 0.03, PME-PME 0.25, PME-PLE 0.16, MOQ, 0.46 long, frontal view, anterior width 0.34, posterior width 0.65. Chelicerae dark brown with small setae, slightly enlarged anteriorly, with distinct lateral carina (Figs. 134–138). Sternum yellowish with small light brown setae, 1.20 long, 1.20 wide. Labium dark reddish-brown, lighter at anterior margin; 0.42 long, 0.42 wide. Legs pale brown, obscure annular dark markings on all segments except tarsi, relative length: IV-I-II-III, I - femur 2.90/ tibia-patella 4.00/ metatarsus 3.12/ tarsus 1.40/ total 10.90; II - 2.80/ 3.56/ 2.70/ 1.20/ 9.06; III - 2.16/ 2.52/ 2.08/ 0.88/ 7.64; IV - 2.68/ 3.20/ 3.40/ 1.40/ 10.68. Straight tarsi, all claws dentate, upper claw with ten teeth and lower claw with one long, slender tooth (Fig. 143). Tarsal organ located on anterior third of tarsus (Fig. 139), slightly elevated (Fig. 140). Trichobothria conspicuous (Fig. 141). Sensory organs (slit sense) laterally on tarsus (Fig. 142). Spinnerets (Fig. 144): ALS (Fig. 145) yellowish, with numerous piriform gland spigots (PI); PLS (Fig. 146) light, with numerous aciniform glands spigots (AC). Abdomen 2.3 long, dorsum white, fine reticulations, scattered pairs of dark maculae; sides with scattered dark maculae. Venter white



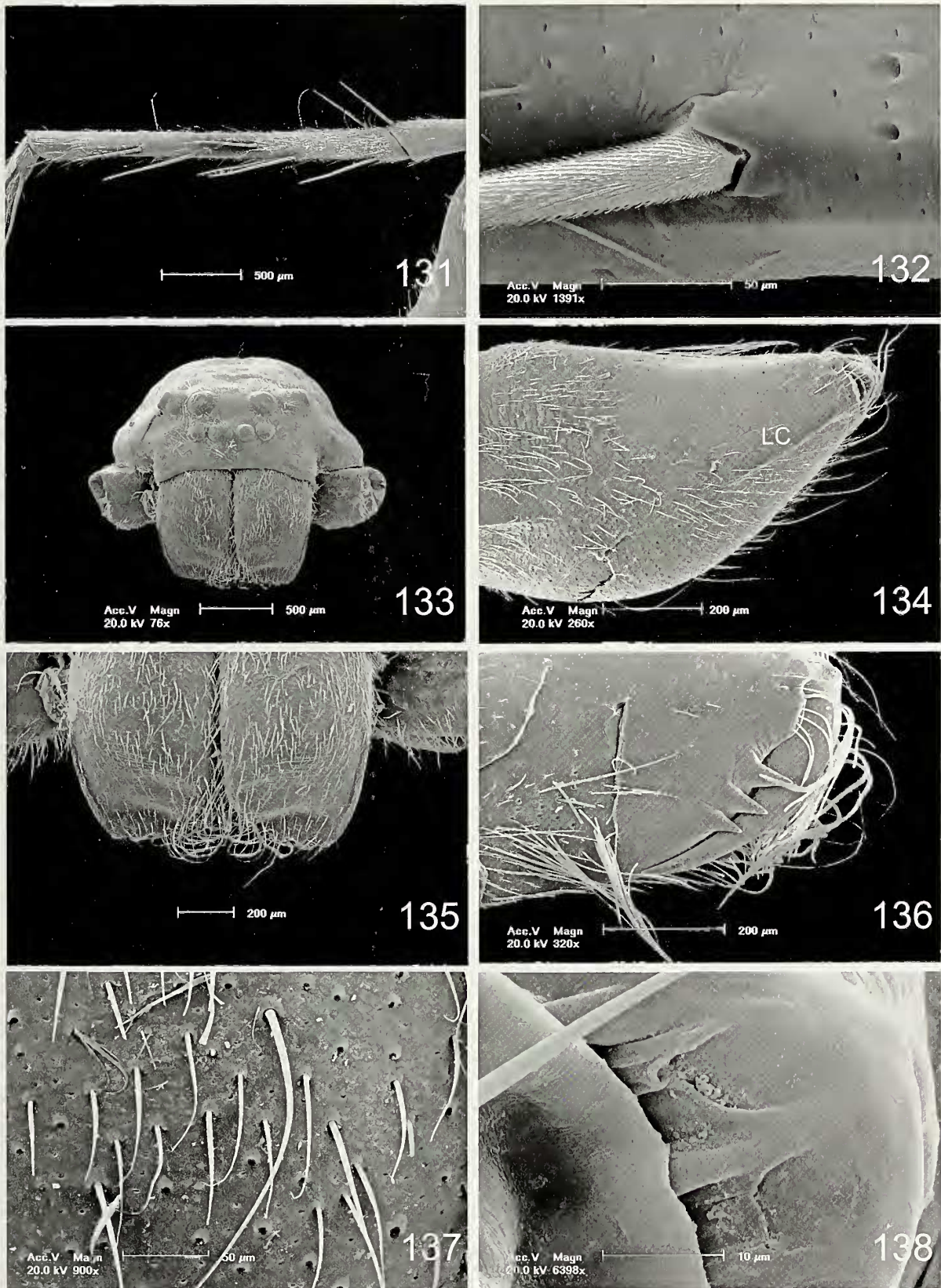
Figs. 119–122.—*Enna bonaldoi*. 119, 120. Right male palpus: 119. Retrolateral view; 120. Ventral view. 121, 122. Epigynum: 121. Dorsal view; 122. Ventral view. Abbreviations: ECD, ectal division of retrolateral tibial apophysis; HS, head of spermathecae; VP, ventral protuberance of male palpal tibia.





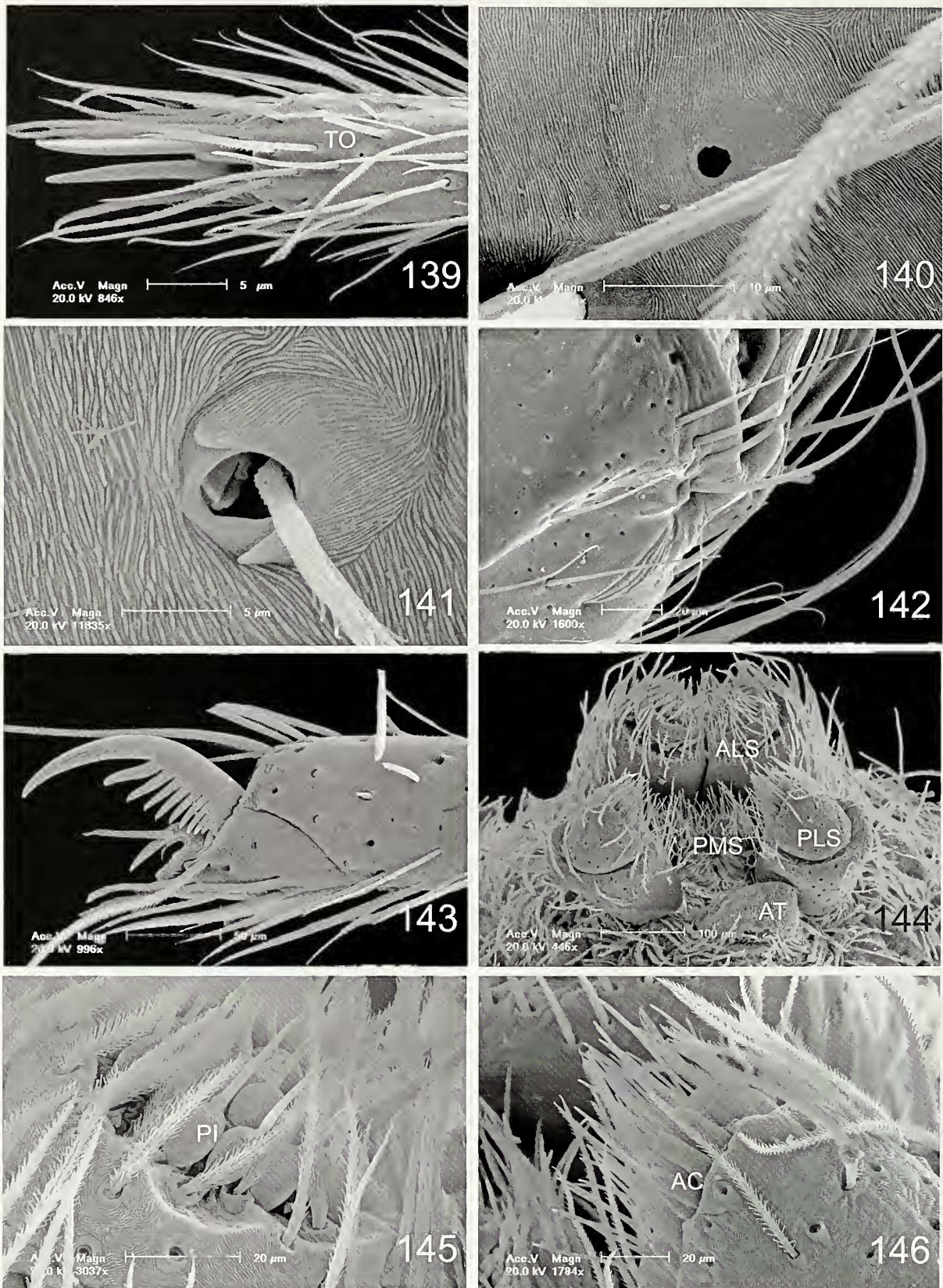
Figs. 123–130.—Morphological details of *Enna bonaldoi*. 123–127. Left male palpus: 123. Ventral view of bulb; 124. Median apophysis; 125. General view of guide; 126. Guide; 127. Ectal division of retrolateral tibial apophysis. 128. Female epigynum, ventral view. 129. Serrula of left endite. 130. Scopula of left endite. Abbreviations: AF, anterior field of epigynum; CO, copulatory opening; DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis; G, guide; MF, middle field of epigynum; SC, scape of epigynum; ST, subtegulum; T, tegulum; VD, ventral division of median apophysis.





Figs. 131–138.—Morphological details of *Enna bonaldoi*: 131. Tibial macrosetae, general view; 132. Base of macrosetae; 133. Male carapace, frontal view; 134. Lateral carina of male chelicerae; 135. Anterior depression of chelicerae; 136. Promarginal teeth of chelicerae; 137. Setae of chelicerae; 138. Anterior sulci of chelicerae, posterior view. Abbreviation: LC, lateral carina.





Figs. 139-146.—Morphological details of *Emma bonaldi*: 139. Position of tarsal organ of leg II; 140. Tarsal organ; 141. Bothrium; 142. Slit sense organ of tarsus IV; 143. Tarsal claw of leg IV; 144. Male spinnerets, general view; 145. Anterior lateral spinneret; 146. Posterior lateral spinneret. Abbreviations: AC, aciniform gland spigot; ALS, anterior lateral spinneret; AT, anal tubercle; LC, lateral carina; PI, piriform gland spigot; PLS, posterior lateral spinneret; PMS, posterior median spinneret; TO, tarsal organ.



laterally, otherwise pale. Palpal tibia with ventral protuberance prominent (Fig. 119). Retrolateral tibial apophysis with ectal division short and coiled at distal portion; ental division small and covered by ectal division in retrolateral view (Figs. 119, 127). Palpal bulb with tegulum and subtegulum prominent (Figs. 120, 123).

*Female (paratype)*: Carapace as in male, 2.28 long, 2.00 wide. Clypeus, light brown, dark, transverse spot medially under AME, 0.20 high. Anterior eye row straight, 0.60 wide; posterior 1.15. AME 0.14, ALE 0.10, PME 0.22, PLE 0.23; AME–AME 0.07, AME–ALE 0.04, PME–PME 0.27, PME–PLE 0.16, MOQ, dorsal view 0.44, frontal view, anterior width 0.35, posterior width 0.66. Chelicerae light brown, no distinct pattern. Sternum pale brown; 1.12 long, 1.16 wide. Labium dark brown, lighter at anterior margin; 0.40 long, 0.42 wide. Legs color as in male, relative length: IV–I–II–III, I – femur 2.50/ tibia-patella 3.36/ metatarsus 2.40/ tarsus 1.16/ total 9.42; II – 2.40/ 3.12/ 2.20/ 1.06/ 8.78; III – 2.00/ 2.30/ 1.80/ 0.86/ 6.96; IV – 2.84/ 3.00/ 3.24/ 1.28/ 10.36. Abdomen 3.04 long, coloration as in male. Epigynum small, posterior margin smooth (Figs. 121, 128). Head of spermathecae short, rounded and with small apical projections (Fig. 122).

**Distribution.**—This species is known only from the type locality in Brazil (Amazonas) (Fig. 5).

*Enna riotopo* new species

Figs. 5, 147–150

**Type material.**—Holotype male: ECUADOR: *Tungurahua*: Rio Topo valley, 01°24'S, 78°12'W, 17 June 1943, HEF DLF – Exline/Peck (CAS). Paratypes: ECUADOR: 2 males, 1 female, Pastaza river near Wapota, 01°30'S, 78°05'W, elevation 1300 m, 2 April 1938, W.C. MacIntyre (MCZ).

**Etymology.**—The specific name is a noun in apposition taken from the type locality.

**Diagnosis.**—The male palpus of *E. riotopo* (Figs. 147, 148) resembles that of *E. bonaldoi* (Figs. 119, 120) by the shape of the median apophysis and the absence of the ventral division of the median apophysis, but differs by the small grooves on the lateral lamella (Fig. 148) and by the slender shape of the ectal division of the retrolateral tibial apophysis that is curved and ventrally pointed (Fig. 147). The female bears a rounded median triangular excavation on the posterior margin of the epigynum and two small median accessory spermathecae (Fig. 150).

**Description.**—*Male (holotype)*: Carapace 2.32 long, 2.00 wide, pale brown, no clear pattern, covered with short, light setae, blached due to drying. Clypeus pale brown, no distinct pattern, light setae, 0.20 high. Anterior eye row straight, 0.65 wide; posterior 1.10 wide. AME 0.17, ALE 0.12, PME 0.21, PLE 0.22; AME–AME 0.05, AME–PLE 0.05, PME–PME 0.26, PME–PLE 0.18, MOQ, 0.45 long frontal view 0.68, anterior width 0.35, posterior width 0.64. Chelicerae dark brown, slightly enlarged anteriorly, no distinct groove above fang but flattened area instead, lateral carina conspicuous; promargin with three teeth, equidistant, middle largest and retromargin of fang furrow with four teeth, equidistant, proximal two largest. Sternum light brown, 1.10 long, 1.10 wide. Labium dark reddish-brown, lighter at anterior margin; 0.41 long, 0.42 wide. Legs pale brown, obscure annular dark markings on all segments except tarsi,

relative length: I–IV–II–III, I – femur 2.80/ tibia-patella 3.90/ metatarsus 2.92/ tarsus 1.40/ total 11.02; II – 2.64/ 3.32/ 2.50/ 1.16/ 9.62; III – 1.76/ 2.30/ 1.94/ 0.96/ 6.96; IV – 2.72/ 3.00/ 3.32/ 1.32/ 10.36. Abdomen 1.9 long, shriveled and pattern obscured due to drying. Palpus with dorsal division with two pointed projections at anterior portion (Fig. 148). Ectal division of RTA prominent, rounded at apex and ventrally pointed and ental division enlarged at base and dorsally pointed (Fig. 147).

*Female (paratype)*: Carapace as in male, 2.24 long, 2.00 wide. Clypeus, as in male, 0.25 high. Anterior eye row straight, 0.67 wide; posterior recurved 1.20 wide. AME 0.16, ALE 0.11, PME 0.21, PLE 0.22; AME–AME 0.06, AME–ALE 0.06, PME–PME 0.30, PME–PLE 0.20, MOQ, 0.48 long, dorsal view, anterior width 0.36, posterior width 0.69. Chelicerae dark brown, lighter distally, no pattern, long light setae; promargin with three teeth, middle largest and retromargin with three teeth, distal largest, proximal smallest. Sternum as in male; 1.05 long, 1.25 wide. Labium as in male; 0.46 long, 0.45 wide. Legs as in male, relative length: IV–I–II–III, I – femur 2.76/ tibia-patella 3.64/ metatarsus 2.50/ tarsus 1.20/ total 10.10; II – 2.64/ 3.30/ 2.28/ 1.04/ 9.26; III – 2.24/ 2.50/ 1.94/ 1.00/ 7.68; IV – 2.96/ 3.28/ 3.40/ 1.28/ 10.92. Abdomen 2.6 long, coloration as in male, with scattered setae. Epigynum with short, posterior margin a deep triangular excavation (Fig. 150); rounded spermathecae, with two small accessory spermathecae (Fig. 149).

**Distribution.**—This species is known only from the type locality in Ecuador (Fig. 5).

*Enna redundans* (Platnick, 1993) new combination

Figs. 5, 151–155

*Dosseus fidelis* Mello-Leitão 1943:165 (junior primary homonym of *Dosseus fidelis* Mello-Leitão 1920).

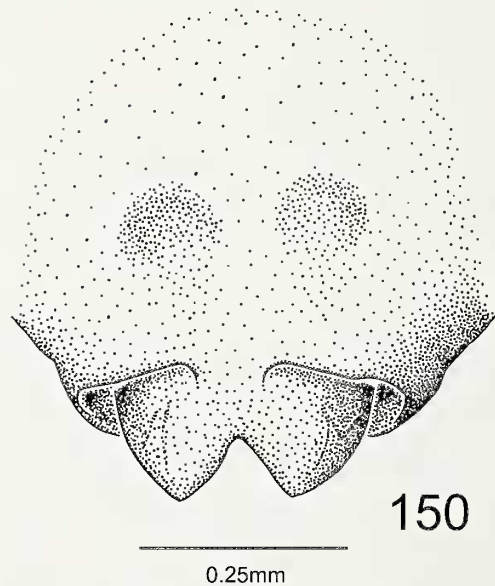
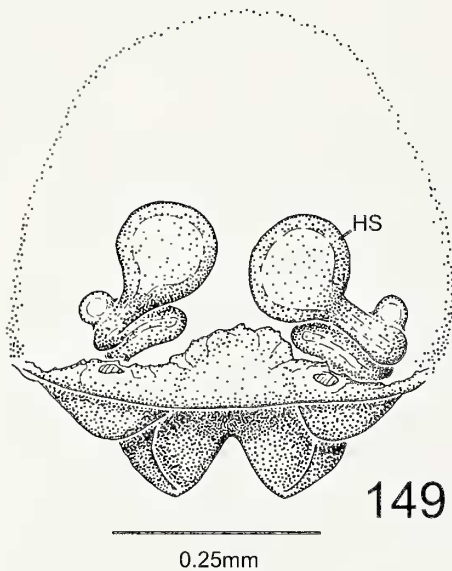
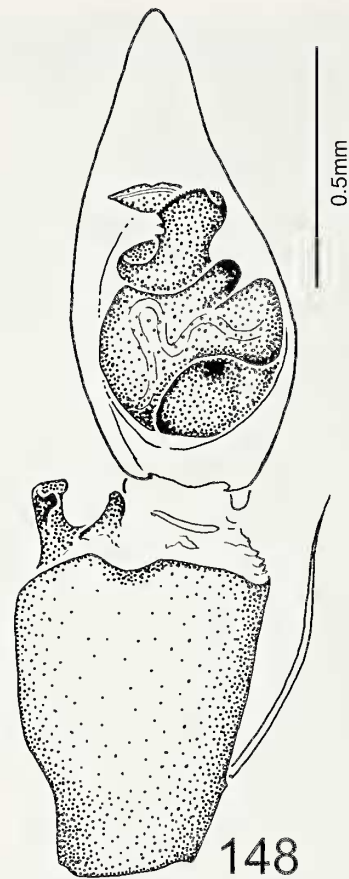
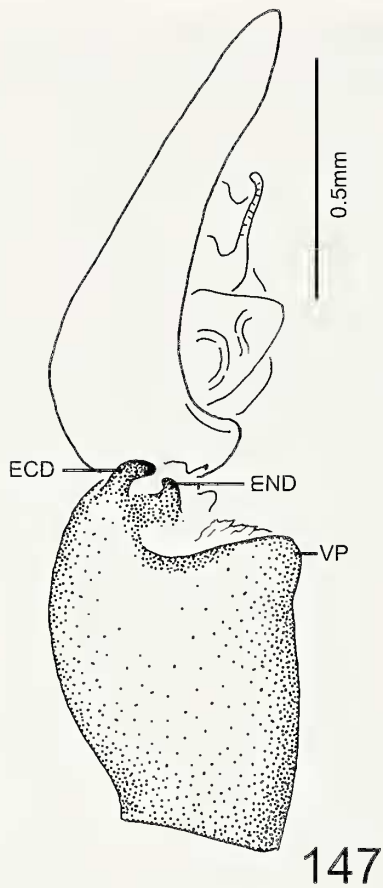
*Dosseus redundans* Platnick, 1993:523 (replacement name for *Dosseus fidelis* Mello-Leitão 1943); Platnick 2007.

**Type material.**—Lectotype male (present designation): BRAZIL: *Paraíba*: Soledade, 7°03'S, 36°21'W (MNRJ 58301). Paralectotype: 1 female, same data as holotype (MNRJ).

**Diagnosis.**—The males of *E. redundans* are similar to those of *E. braslandia* in the general shape of the median apophysis (Figs. 34–36), but can be distinguished by the shorter lateral lamella (Figs. 35, 152) and the shorter ental division of the retrolateral tibial apophysis (Fig. 151). The female epigynum resembles the one of *E. colonche* (Fig. 61) but can be distinguished by the presence of a short median scape (Fig. 155).

**Description.**—*Male (lectotype)*: Carapace 3.81 long, 3.32 wide, yellowish with indistinct pattern, brownish in ocular region. Clypeus, eye diameters and interdistances could not be measured due to specimen's bad preservation. Chelicerae removed, slightly wider at base, glabrous, reddish brown, lateral carinae absent. Sternum yellowish, 1.99 long, 1.90 wide, labium yellowish, whitish distally, 0.77 long, 0.58 wide. Legs yellowish. Measurements: I – femur 4.39; II – femur 2.98; III – femur 4.15/ patella-tibia 4.64/ metatarsus 3.81/ tarsus 1.32; IV – 4.56/ 6.22/ 6.14/ 1.90. Abdomen, 2.98 long, yellowish; brownish ventrally. Palpus short, guide long and slender (Figs. 152, 153). Retrolateral tibial apophysis prominent with



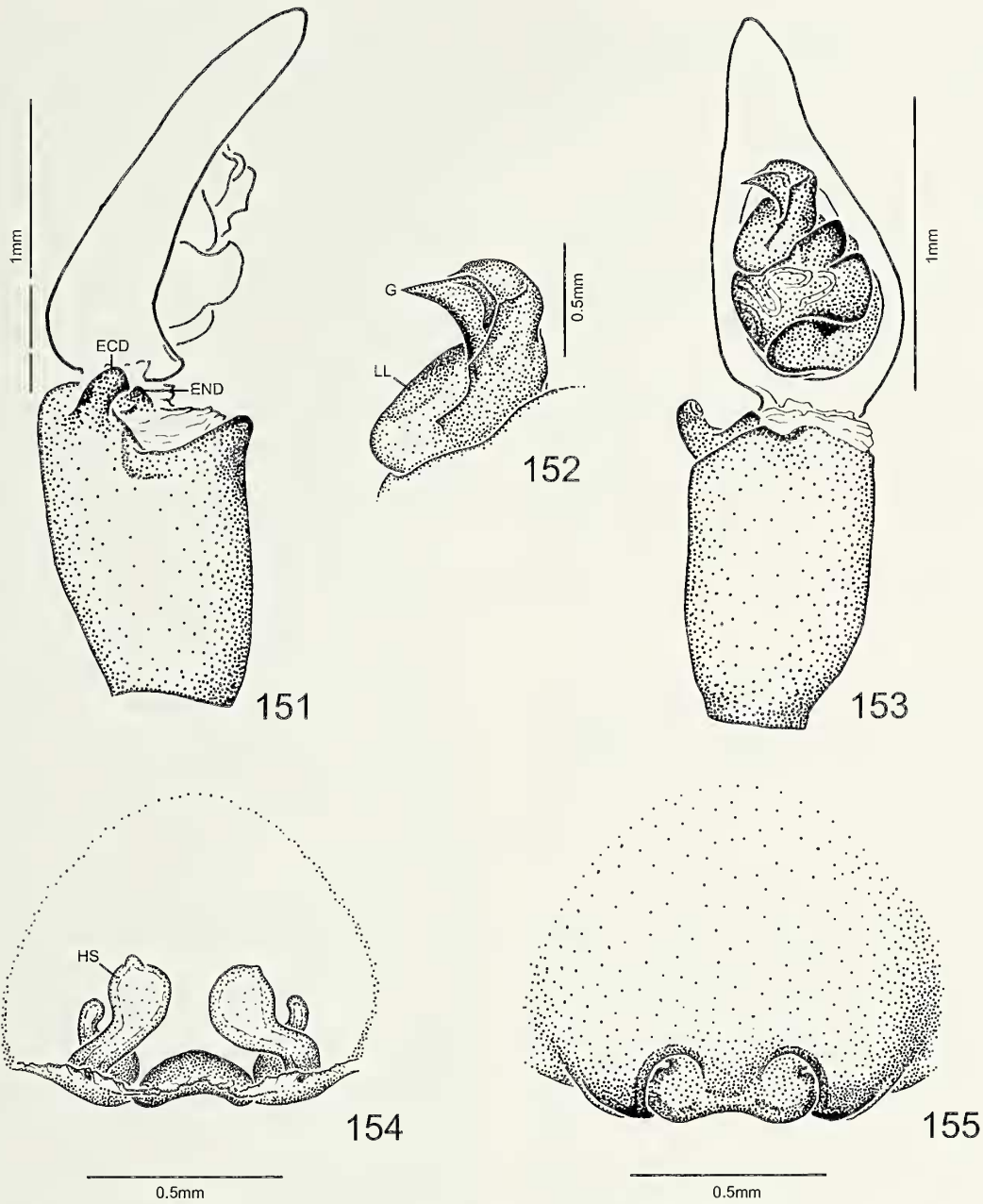


Figs. 147-150.—*Enna-riotopto*. 147, 148. Right male palpus: 147. Retrolateral view; 148. Ventral view. 149, 150. Epigynum: 149. Dorsal view; 150. Ventral view. Abbreviations: ECD, ectal division of retrolateral tibial apophysis; END, ental division of the retrolateral tibial apophysis; HS, head of spermathecae; VP, ventral protuberance of male palpal tibia.

ectal division concave and coiled at apex (Fig. 151); ental division short, subtriangular (Fig. 151).

*Female (paralectotype)*: Carapace 3.56 long, 3.15 wide, coloration as in male. Clypeus light brown, 0.15 high, 1.55

long. Anterior eye row recurved, 0.89 wide, posterior 1.12. AME 0.12, ALE 0.09, PME 0.15, PLE 0.16, AME-AME 0.09, AME-ALE 0.03, PME-PME 0.34, PME-PLE 0.40, MOQ 0.83 long, dorsal view, 0.49, frontal view 0.51, anterior width



Figs. 151–155.—*Enna redundans*. 151–153. Right male palpus: 151. Retrolateral view; 152. Detail of median apophysis; 153. Ventral view. 154, 155. Epigynum: 154. Dorsal view; 155. Ventral view. Abbreviations: ECD, ectal division of retrolateral tibial apophysis; END, ental division of the retrolateral tibial apophysis; G, guide; HS, head of spermathecae; LL, lateral lamella.

0.48, posterior width 0.50. Chelicerae shape and coloration as in male. Sternum yellowish, 1.70 long, 1.79 wide; labium yellowish, 0.52 long, 0.62 wide. Legs yellowish ventrally, light brown dorsally. Measurements: I – missing; II – femur 4.06/ patella-tibia 2.90; III. Femur 2.90; IV. Femur 4.39/ patella-tibia 6.22/ metatarsus 4.81/ tarsus 1.74. Abdomen 3.31 long, coloration as in male. Epigynum with a small median projection on posterior margin (Fig. 155) and short head of spermathecae (Fig. 154).

**Distribution.**—This species is only known from Brazil (Paraíba) (Fig. 5).

**Remarks.**—The male syntype has been selected as the lectotype since in Mello-Leitão’s first description of this species a holotype was designated. The male lectotype has all

the legs and palpus disarticulated, setae removed and anterior portion of carapace damaged and chelicera removed.

NOMINA DUBIA

*Enna approximata* (O. Pickard-Cambridge 1893), nomen dubium

*Perissoblemma approximatum* O. Pickard-Cambridge 1893:105, fig. 4; Roewer 1954:113; Bonnet 1956:1656.

*Enna approximata* (O. Pickard-Cambridge): Petrunkevitch 1911:543; Platnick 2007.

**Type material.**—Holotype, immature female: PANAMA: Bugaba, 8°29’N, 82°37’W, Champion (BMNH 1905.iv.28.875/6).



**Remarks.**—This species is considered as a nomen dubium because the type specimen is an immature female and therefore does not present enough morphological characters to ensure a secure determination relative to any other species.

#### ACKNOWLEDGMENTS

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